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Index To Volume 114 1940

# INDEX, 1940

# VOLUME, 114

Bori Bott Box, E. Box

Brain Brain

Can

Ca

A	A	ssociation of American Railroads—(Continued)  Mechanical Division—(Continued)		Capacity of, Determining, by Edward J.	
Accelerometers, Gray, Miner and Symington	349*	Annual meeting245*,	287 \$ 82	Harley	362‡ 262*
Accidents			3595	Embrittlement in boilers, by W. C.	
Bureau of Locomotive Inspection report City of San Francisco (Sou. Pac.)13,	52* 21§	Election of officers	247	Schroeder (M. B. A.)	182*
Grade crossing and trespassing	515†	neer	298*	Due to low water	238‡
Water in cylinders, Damaging effects of.	1109	Reports Arbitration Committee	265	In Germany, by Wm. T. Hoecker Fabricating, with micrometers	3621 5418
by M. D. Francy	361‡	Axle, Passenger-car	283	Maintenance, Problems of, by A. G.	
Acker, S. H., Equalizing flow of air through locomotive grates	140*	Brakes and brake equipment	254 277	Trumbull	451 276
Advertising, Stenciled, on freight cars (A.	363*	Couplers and draft gears	255	Patches (competition)26*, 79*, 200*,	
AGA Metal Tube Co., Tubing of carbon and		General Committee	246	Questions and Answers	370*
alloy steel	205* 333†	Intercrystalline cracks in locomotive boilers, by W. C. Schroeder, A. A. Berk, and R. A. O'Brien	0600	Dry pipe. Design of, in boilers without	222
Air brakes (see Brakes, Air)		Labor and material prices	262* 269	steam dome Evaporation, Determining, size of in-	233
Air Reduction Sales Co., Planograph gas	315	Locomotive construction	261 271*	jector and safety valves330, Firebox sheets, Holding and welding	362‡
cutter	113*	Lubrication of cars and locomotives	250	Gage, Steam, Testing and repairing	163
Alar Wood Steel Co., Slotted running boards Alarm, Low-water, with two whistles, Barco	314*	Specifications for materials  Tank cars	270 259	Gusset brace, Cross-sectional area of.	372*
Mfg. Co	7*	Wheels	251	Patches, Crown-sheet, Types of	411*
Allied Ry. Supply Assn. Election of officers	509	Tests Draft-gear recoil	258*	required in	549
Exhibit	394 509	Truck, Freight-car	345*	Rivet holes, Checked and cracked, in	164*
Allis-Chalmers Mfg. Co., Turbine and con-	003	Open meeting542\$, 555†, Pelley, J. J.	557†	Rivets required to hold brace rods	164
densing locomotives research work (R. F. & T. E. A.)	503	1940 outlook	39 517	Shell course tolerances	373
Aluminum Co. of America, 3,000,000-lb.		Readiness and capacity of railroads Purchases and Stores Division—Subject	317	groove in a	204*
American Car and Foundry Co., Berwick	124	committees	556	Shells, Defective, Reinforcement of, by E. H. Heidel	200*
centennial	241†	Advertising, Stenciled, on freight cars	363*	Staybolts, Calculating area supported	
American Locomotive Co., 660- and 1,000-hp. Diesel switchers	379*	Cars, Pendulum type Crane, P. & H. Model 255 crawler	126† 554*	Staybolts, Unequally-spaced, Area sup-	25
Diesel switchers	422*	Foreman, Road, and Diesel-electric loco-		ported by	372* 164*
American Rolling Mill Co., George M. Ver-		motive, by Leo W. Powell Locomotive, Diesel-electric, Design, op-	505	Syphon patch with a spiral seam	79*
ity, honored	334	eration and maintenance of, by H. V. Gill	437*	Tube sheet, Front, Application of, by welding	204*
Botteron, L. K., Locomotive cylinder- power measurement	526	Atlantic Coast Line, Igloo, sand-drying		Tubes, Renewing, in a Coffin feed-	26*
Brandt, C. A., The locomotive boiler		house, by C. L. Meister	544*	Wrapper sheets, Grooved and corroded,	
Frv. L. H., Chairman Railroad Div	100* 37	Div.)	282	Repairing	545 310
Fry, L. H., Chairman Railroad Div Officers for 1941	516	Ayers, A. R., How to increase freight-train speeds	2269	Steel, Nickel, for (M. B. A.)	463
Ryan, J. L., Combating locomotive obso- lescence	310*			Study of, by C. A. Brandt (A. S. M. E.)43*, 66\$,	100*
American Steel Foundries, Truck-spring snubbers, by W. S. Spieth American Wood Preservers' Assn., Treated	175*	В		Welded (D. & H.)	457
American Wood Preservers' Assn., Treated		Belowing modine Donate Cited Me		ments and opportunities, by M. A. Quinn	
Anderson, H., Heater cars for use with	358	Balancing machines, Dynetric, Gisholt Ma-	158*	(M. B. A.)  Boilermaking with micrometers	451 541§
Diesel-electric locomotives	186* 557†	Baldwin Locomotive Works Dispensary at Eddystone	298†	Boilermaking with micrometers Boiler Makers' Assn.	-
Arbitration Committee Decisions	0.01	Locomotives, Stock	37†	Address by Elliott, Edward C., Neglected high	
Case No. 1770—Southern vs. Pennsylvania-Conley		660-hp	56*	Pressures Henry, Robert S., Two jobs for every	452
Tank Line-Rules 12 and 84	35	Test: Furnace and firebox support and boiler waste sheets (Mech. Div.)	271	railroad man Quinn, M. A., Accomplishments and	536
1771—Missouri Pacific vs. Texas & New Orleans—Rules 32 and 44	35	Baltimore & Ohio, Diesel-electric completes		opportunities of the master boiler	
1772—Mobile & Ohio vs. St. LS.F.—	236	365th daily run	169†	maker Trumbull, A. G., Problems of boiler	451
Rule 5	226	Barco Mfg. Co. Alarm, Low-water, with two whistles	7*	maintenance	451
Rule 84 1774—St. LS. F. vs. Missouri & Arkansas—Rule 12	236	Connections Locomotive-tender, Type 3VX		Election of officers	450 450
kansas—Rule 12	366	Steam-heat, FT-2	413*	Reports and papers Boilers, Embrittlement in, by W. C.	
Rule 113	366	Bearing, Roller, applications in United States and Canada (Mech. Div.)	273	Schroeder	182*
1776—St. LS. F. vs. S. A. L.—Rule 12 1777—Philadelphia Quartz Co. vs. N. Y.	366	Beaver Pipe Tools, Inc., Model C threading		bollers, Fabricating	5415
		machine	423*	Cinder cutting of brebox specis, bues,	
N. H. & H.—Rules 32 and 43	406	machine Becket, Frederick Mark, Dr., Elliott Cresson	423*	Cinder cutting of firebox sheets, flues, tubes and smokeboxes	469
N. H. & H.—Rules 32 and 43 1778—C. G. W. vs. Missouri Pacific— Rule 43	406 406	Medal  Bell, Spurgeon, Productivity, Wages and	423*	tubes and smokeboxes Feedwater, Boiler, Chemical treatment	469 462
N. H. & H.—Rules 32 and 43 1778—C. G. W. vs. Missouri Pacific— Rule 43  Arbitration Committee report (Mech. Div.)	406	Medal Bell, Spurgeon, Productivity, Wages and National Income.	423* 242 190 <b>§</b>	tubes and smokeboxes  Feedwater, Boiler, Chemical treatment of  Firebox materials, Service of, Mc-	462
N. H. & H.—Rules 32 and 43 1778—C. G. W. vs. Missouri Facific— Rule 43	406 406	Medal  Bell, Spurgeon, Productivity, Wages and National Income. Bending press, Model J-12, Cleveland Crane	423* 242 190§	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica-	462 531*
N. H. & H.—Rules 32 and 43	406 406 263	Medal Bell, Spurgeon, Productivity, Wages and National Income Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley. Frank. Spring cotter for lifting	423* 242 190\$ 421*	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of	462 531* 463
N. H. & H.—Rules 32 and 43	406 406 263 170° 374†	Medal Bell, Spurgeon, Productivity, Wages and National Income  Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley, Frank, Spring cotter for lifting scale Berk A. A. Littercrystalline cracks in boilers	423* 242 190\$ 421* 371*	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of Tender cistern maintenance Tube and flue application	462 531*
N. H. & H.—Rules 32 and 43.  1778—C. G. W. vs. Missouri Pacific— Rule 43  Arbitration Committee report (Mech. Div.). Armour Institute of Technology, Summer graduate institute  Army maneuvers make heavy demands on railroads  Aronson, Jacob, Monopoly mind in employee relations  5428,	406 406 263 170° 374†	Medal  Bell, Spurgeon, Productivity, Wages and National Income. Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley, Frank, Spring cotter for lifting scale Berk, A. A., Intercrystalline cracks in boilers (Mech. Div.) Berkley Machine Works & Foundry Co.,	423* 242 190\$ 421* 371* 262*	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of Tender cistern maintenance Tube and flue application Water circulation in the boiler. Means	462 531* 463 471 468
N. H. & H.—Rules 32 and 43.  1778—C. G. W. vs. Missouri Pacific— Rule 43  Arbitration Committee report (Mech. Div.). Armour Institute of Technology, Summer graduate institute Army maneuvers make heavy demands on railroads  Aronson, Jacob, Monopoly mind in employee relations  Association of American Railroads  Association of American Railroads	406 406 263 170* 374† 555† 370	Medal Bell, Spurgeon, Productivity, Wages and National Income  Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley, Frank, Spring cotter for lifting scale Berk, A. A., Intercrystalline cracks in boilers (Mech. Dlv.)  Berkley Machine Works & Foundry Co., Stoker	423* 242 190\$ 421* 371* 262* 414*	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of Tender cistern maintenance Tube and flue application Water circulation in the boiler. Means	462 531* 463 471 468
N. H. & H.—Rules 32 and 43.  1778—C. G. W. vs. Missouri Pacific— Rule 43  Arbitration Committee report (Mech. Div.).  Armour Institute of Technology, Summer graduate institute Army maneuvers make heavy demands on railroads  Aronson, Jacob, Monopoly mind in employee relations  Association of American Railroads  Car Service Division Military Transportation Section.	406 406 263 170* 374† 555† 370	Medal Bell, Spurgeon, Productivity, Wages and National Income  Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley, Frank, Spring cotter for lifting scale Berk, A. A., Intercrystalline cracks in boilers (Mech. Div.)  Berkley Machine Works & Foundry Co., Stoker Bethlehem Steel Co., Red Tiger tool steel. Billing, Interchape and (C. D. O. A.)	423* 242 190\$ 421* 371* 262* 414* 238	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of Tender cistern maintenance Tube and flue application Water circulation in the boiler, Means to improve Welding — Oxyacetylene and electric processes in boiler and tender work	462 531* 463 471 468 459* 453
N. H. & H.—Rules 32 and 43  1778—C. G. W. vs. Missouri Pacific— Rule 43  Arbitration Committee report (Mech. Div.).  Armour Institute of Technology, Summer graduate institute  Army maneuvers make heavy demands on railroads  Aronson, Jacob, Monopoly mind in employee relations  Association of American Railroads  Car Service Division  Military Transportation Section  Report  Mechanical Division	406 406 263 170* 374† 555† 370	Medal Bell, Spurgeon, Productivity, Wages and National Income  Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley, Frank, Spring cotter for lifting scale Berk, A. A., Intercrystalline cracks in boilers (Mech. Div.)  Berkley Machine Works & Foundry Co., Stoker Bethlehem Steel Co., Red Tiger tool steel. Billing, Interchape and (C. D. O. A.)	423* 242 190\$ 421* 371* 262* 414* 238	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of Tender cistern maintenance Tube and flue application Water circulation in the boiler, Means to improve Welding — Oxyacetylene and electric processes in boiler and tender work Boilers, Stationary, Coal-fired (R. F. & Books	462 531* 463 471 468 459* 453 503
N. H. & H.—Rules 32 and 43.  1778—C. G. W. vs. Missouri Pacific— Rule 43  Arbitration Committee report (Mech. Div.). Armour Institute of Technology, Summer graduate institute  Army maneuvers make heavy demands on railroads  Aronson, Jacob, Monopoly mind in employee relations  Aronson are	406 406 263 170* 374† 555† 370 332† 557†	Medal Bell, Spurgeon, Productivity, Wages and National Income Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley, Frank, Spring cotter for lifting scale Berk, A. A., Intercrystalline cracks in boilers (Mech. Div.) Berkley Machine Works & Foundry Co., Stoker Bethlehem Steel Co., Red Tiger tool steel. Billing, Interchange and (C. D. O. A.) Birch, T. H., Pipe and air-brake shop devices (C. M. St. P. & P.) Black & Decker Mfg. Co., No. 8 Tapgun. Blowdown. Boiler. methods and control (M.	423* 242 190§ 421* 371* 262* 414* 236* 485 550* 419*	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of Tender cistern maintenance Tube and flue application Water circulation in the boiler, Means to improve Welding — Oxyacetylene and electric processes in boiler and tender work Boilers, Stationary, Coal-fired (R. F. & T. E. A.) Books A. S. T. M. Specifications for Pipe and	462 531* 463 471 468 459* 453 503
N. H. & H.—Rules 32 and 43  1778—C. G. W. vs. Missouri Pacific— Rule 43  Arbitration Committee report (Mech. Div.).  Armour Institute of Technology, Summer graduate institute  Army maneuvers make heavy demands on railroads  Aronson, Jacob, Monopoly mind in employee relations  As pan hopper castings  As pan hopper castings  Association of American Railroads  Car Service Division  Military Transportation Section  Report  Mechanical Division	406 406 263 170* 374† 555† 370 332† 557†	Medal Bell, Spurgeon, Productivity, Wages and National Income  Bending press, Model J-12, Cleveland Crane & Engineering Co. Bentley, Frank, Spring cotter for lifting scale Berk, A. A., Intercrystalline cracks in boilers (Mech. Dlv.)  Berkley Machine Works & Foundry Co., Stoker	423* 242 190§ 421* 371* 262* 414* 236* 485 550* 419*	tubes and smokeboxes Feedwater, Boiler, Chemical treatment of Firebox materials, Service of, Mc- Brian, Ray Rivets, Iron, Steel and alloy, applica- tion of Tender cistern maintenance Tube and flue application Water circulation in the boiler, Means to improve Welding — Oxyacetylene and electric processes in boiler and tender work Boilers, Stationary, Coal-fired (R. F. & Books	462 531* 463 471 468 459* 453 503

\* Illustrated article; \$ editorial; † short, non-illustrated article or note; ‡ communication.

362‡ 262\* 182\*

372\* 411\* 164\* 204\* 200\* 372\* 204\* 26\* 100\* 

> 541§

D 1 (C (1 1)					
Books—(Continued)	••	Car Dept. Officers' Assn (Continued)		Clubs and Associations-(Continued)	
Diesel Engines, by B. J. von Bongart	23 23	Address by—(Continued) Henry, Robert S., Two jobs for every		Northwest Carmen's Assn., Truck-spring	175*
Machine Shop Training Course, by		railroad man	536	snubbers, by W. S. Spieth	
Engineering Opportunities  Machine Shop Training Course, by Franklin D. Jones  Procedure Handbook of Arc Welding	401	Symes, J. M., Importance of car de- partment in rail transportation	473	Savings, by M. D. Raymond	81
Design and Practice	317	Meeting 353,	472*	Collective bargaining	515†
Proceedings Association of American Railroads,		Reports Commodity cards, Standard classifica-		Collective bargaining Collins, W. E., Locomotive tests at Selkirk (R. F. & T. E. A.)	488
Mech. Div.	289	_ tion	478	Commodity cards, Standard classification	
Car Dept. Officers' Assn., 1939 Master Boiler Makers' Assn	227 67	Freight-car maintenance Interchange and billing	480 485	Competition, Boiler patch26*, 79*, 200*,	478
Railway Fuel and Traveling Engineers'		Loading rules	484	232*,	370*
Assn. Productivity, Wages and National In-	111	Lubricants and lubrication	477 483	Competition, Subsidized, Taxes and, by Robert S. Henry	538
Productivity, Wages and National Income, by Spurgeon Bell	190\$	Painting Shop operation—Electric welding	475	Compressed air, Cutting cost of	152
Smoke Prevention Tool Making, by Charles Bradford Cole Turret Lathe Operator's Manual	360 152	Supplements A. A. R. Mechanical Divi- sion	5148	Confusion in the front office	405* 514 <b>\$</b>
Turret Lathe Operator's Manual	317	Sion	5149	Connection, Locomotive-tender, Type 3VX,	189*
Who's Who in Railroading in North	360	Cars Freight		Connection, Steam-heat, FT-2, Barco Mfg. Co.	413*
Wrought Iron, Its Manufacture, Characteristics and Application, by James		Box		Conventions .	3998
Aston and Edward B. Story	67	Automobile, D. & R. G. W. (Pressed Steel)	62*		510
Boring machines (see Machine Tools)		50-ton, all-welded, (C. M. St. P. & P.)	528*	Guest speakers at	510% 510%
Aston and Edward B. Story Boring machines (see Machine Tools) Botteron, L. K., Cylinder power measurement (A. S. M. E.) Box, Driving, work at Pen Argyl (L. & N.	526	Model, J. M. Fesco	170*	Microphones, at	512
Box, Driving, work at Pen Argyl (L. & N.	407*	With side-observation bay windows		Program changes Corrosion on firebox sheets (M. B. A.)	5139 457
Box, Journal		(C. M. St. P. & P.) Flat, All-welded (Western MdGreen-	193*	Cor-Ten hopper cars show low weight loss	149
Hot (C. D. O. A.) Temperature, by E. S. Pearce. 678, 69*	480 238‡	ville)	181*	Cor-Ten vs. copper steel	60*
Brake, Air	2304	Cor-Ten, show low weight loss	149	Car repairs	5415
D-22 passenger control valve		Nor. Pac. (ACF)	137*	Diesel-electric locomotive Operation and maintenance., 439, 272,	
121, 156, 198, 322, 367, 406,	553	Rebuilt, for cement (Lehigh Valley). Welded (Mech. Div.)	318* 278	2889, 3599	361‡
Questions and answers on33, 73, 121, 156, 198, 322, 367, 406, Report (R. F. & T. E. A.)	496	Refrigerator, with overhead icing (Can.		Repair Locomotive, Surplus (R. F. & T. E. A.)	191 <b>§</b> 491
A.)	494*	Nat'l) Stock, Idea of, by D. V. Costello	211* 157	Maintenance, of friction vs. roller-bearing	421
Maintenance, by J. P. Stewart (L. M.	440	Tank car report (Mech. Div.)	259	locomotives (Mech. Div.)	273 157
O. A.) Shop devices (C. M. St. P. & P.)	550*	Passenger (see also Trains, High-speed) Chair, Rebuilt (Mo. Pac.)	118*	Cotter, Spring, for lifting scale, by Frank	
Sticking (C. D. O. A.)	481 481	Coach, Cor-Ten steel, Pressed Steel Car Co.		Bentley Counterbalancing: Semi-crossbalancing driv-	371*
Brake, Hand, Ajax, on Western Maryland		Car Co. Coach-sleeper, Triple-deck (Pullman Co.)	382* 241*	ing wheels (Sou. Pac.)	389*
flat cars Winter weather and	181* 150\$	Coaches, Lightweight (D. & H.)	8*	Coupler, Box-car, repairs (Erie)	553* 255
Brake-rigging failures, Winter weather and Braking, High-speed, Developments (R. F. &	1308	Pendulum type Rail car, Air-cooled (N. Y. S. & W.)	126† 303*	Coupler report (Mech. Div.)	481
T. E. A.) Brakes and brake equipment (Mech. Div.)	494-	Cars. Heater, for use with Diesel-electric		Coverdale & Colpitts report on streamliners Cracks, Intercrystalline, in locomotive boil-	127
Brakes, Freight-car, and weight reduction, by	,	locomotives (Ill. Cen.)	186*	era (Mech Div)	262*
V. R. Willoughby	223	vs. copper steel	60*	Crane, Gantry, for straightening hopper-car top rails (Ill. Cen.) Cranes (see Material handling equipment)	28*
Brandt, C. A., The locomotive boiler. 43*, 668 Brass, Journal, trimmer (Ill. Cen.)	32*	Carter, Charles F., dies Castings, Ash-pan hopper	39 370	Cranes (see Material handling equipment)	20
Brookings Institution, "Productivity, Wages and National Income" Bryan, J. E., Shippers proud of railroads Bucking bar for steel car work	190\$	Champion Rivet Co., Rivets and riveting		Crank-pin failures (Mech. Div.)	274 542§
Bryan, J. E., Shippers proud of railroads	555†	(M. B. A.) Chapman, E. E., Steam consumption of loco-	465*	Crawford, J. C., Saving fuel (R. F. & T. E.	
Bucking bar for steel car work	322* 416*	motive auxinaties (R. F. & I. E. A.)	492	A.) Crossbalancing, Semi, driving wheels, by	489
Budd disc brake (R. F. & T. E. A.)	497	Chicago & North Western Flies, Combating	402*	Morris P. Taylor (Sou. Pac.) Crossett, J. W., Quenched and tempered loco-	389*
Budd, Edward G., Mfg. Co., Analysis of Florida streamliner business	557	Flies, Combating "400" locomotives complete 300,000	222+	motive forgings	219*
Budd, Ralph, Adequacy of transportation	515†	miles		Crosshead guides, Device for locating	113*
Buford, C. H., Address (Mech. Div.) Bulldozers for forming steel car parts (C	. 247	Car parts, Steel, Forming	234*	Crown-sheet patches, Types of	411*
B. & Q.) Bureau of Locomotive Inspection (see Inter	. 234*	Cars, Pendulum type Enginehouse problems, by H. E. Hinds	1267	Cut-off machine, Radiac Type M. A. P.	424*
State Commerce Commission)	•	(L. M. O. A.)	446	DeSano & Son	424
	e	Fuel—Percentage than can be saved, (R.	489	equipment)	420*
Bureau of Safety (see Interstate Commerce			110	Cutting tools, Standardized, Carboloy Co Cylinder-power, High-speed locomotive, measurement, by L. K. Botteron	
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D		F. & T. E. A.) Pioneer Zephyr wreck107,	0.004	measurement, by L. K. Botteron	
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D	78*	Tractor with side-dump trailer	367*		526
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co	. 415*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific	367* 296†	_	526
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D	. 415*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win- dows	367* 296†	D	526
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co	. 415*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win- dows	367* 296†	D Davidson, Edward, Assistant chief inspector of locomotives	526 208
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing	. 415*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win- dows	296† 193* 528*	D  Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers	208
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C Canadian National Cars, Refrigerator, with overhead icin	78* 415* 202*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W Crossett	296† 193* 528*	D Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff	208 545
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushings, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying	78* 415* 202*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win- dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T	367* 296† 193* 528* 1	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system	208 545 26*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)1714 Sash cleaning and glazing at Pt. S	78* 415* 202* g 211* 161* 1, 187*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch	367* 296† 193* 528* 1	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.)	208 545 26* 497
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushings, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171' Sash cleaning and glazing at Pt. S: Charles	78* 415* 202* g 211* 161* 1, 187* t. 197*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific	367* 296† . 193* . 528* 1 . 219* . 216*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.)	208 545 26* 497
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171' Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning	78* 415* 202* g 211* 161* 1, 187* t. 197*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features is	367* 296†  193* 528*  219* 216*  550*	D Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report Buford, C. H. (Mech. Div.)247,	208 545 26* 497 332† 287\$
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning Car	78* 415* 202* g 211* 161* 161* 187* t. 197*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win- dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co. Air Maste	367° 296°† 193* 528°* 219° 216° 550°	D Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report Buford, C. H. (Mech. Div.)247,	208 545 26* 497 332† 287\$
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Freight Construction (Mech. Div.) Design: Car foreman know details	78* . 415* . 202* g 211* . 161* . 187* . 197* . 201*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te	296† - 193* - 528* 1 - 216* - 216* - 550* - 75* - 24* - 157*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report Buford, C. H. (Mech. Div.)247, Commission, appointments Henry, R. S., Pailroads ready 511\$, Pelley, I. J. Railroads ready 511\$,	208 545 26* 497 332† 287 § 295 539 296
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. Springs, Carbon-steel, Reconditioning  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.)	g 211* . 161* . 161* . 187* . 197* . 201*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine	296†	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report Buford, C. H. (Mech. Div.)247, Commission, appointments Henry, R. S., Railroads ready Henry, R. S., Railroads ready	208 545 26* 497 332† 287\$ 295 539 296 332†
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171'Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and evenes. by O. A. Garber (C. D.	g 211* . 161* . 187* . 197* . 201*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.)	296† 193* 528* 1219* 216* 550* 75* 124* 157* 1419*	D Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report Buford, C. H. (Mech. Div.)247, Commission, appointments Henry, R. S., Pailroads ready5118, Pelley, J. J., Railroads ready Ryerson, Edward L., Steel production ample. Shop employment and	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 400\$
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171'Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and evenes. by O. A. Garber (C. D.	g 211* . 161* . 187* . 197* . 201*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.).13	296† 193* 528* 1219* 216* 550* 75* 157* 1419* 449*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report	208 545 26* 497 332† 2878 295 539 296 332† 400\$ 316\$
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. Springs, Carbon-steel, Reconditioning  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. C. A.) New, Number of, put in service firshalf of 1940	g 211* . 415* . 202* g 211* . 161* . 187* . 197* . 201* . 277 . 110\$ . 474	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens	296† 193* 528* 1 219* 216* 550* 75* 157* 1419* 449*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report Buford, C. H. (Mech. Div.)247, Commission, appointments Henry, R. S., Pailroads ready5118, Pelley, J. J., Railroads ready Railway Business Assn. study Ryerson, Edward L., Steel production ample Shop employment and Supervisors, Locomotive, Training Transportation, Adequacy of Troop mobilization, Providing for	208 545 26* 497 332† 2878 295 539 296 332† 515† 400\$ 316\$ 515† 316\$
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co. Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. O. A.) New, Number of, put in service fire half of 1940 Orders May 1, 1939, to May 1, 194	g 211* . 161* . 187* . 197* . 201*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine 'Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens	296† 193* 528* 1 219* 216* 550* 75* 1 550* 1 57* 1 419* 469 21\$ 371*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.). Defense, National Budd's, Ralph, progress report. Buford, C. H. (Mech. Div.) 247, Commission, appointments Henry, R. S., Railroads ready 511\$, Pelley, J. J., Railroads ready 511\$, Pelley, J. J., Railroads ready Railway Business Assn. study Ryerson, Edward L., Steel production ample Shop employment and Supervisors, Locomotive, Training Transportation, Adequacy of Troop mobilization, Providing for Deflector plates, Cold-air (M. B. A.).	208 545 26* 497 332† 2878 295 539 296 332† 515† 400\$ 316\$ 515† 316\$
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171' Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. C. A.) New, Number of, put in service fir half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning	g 211* . 161* . 197* . 201*  277 . 110\$ . 480 . 474 st 333† . 278 . 541\$	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.).13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co.	296† 193* 528* 1193* 216* 216* 550* 157* 157* 1419* 1419* 1419* 1419* 157* 157* 157* 157* 157* 157* 157* 157	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report	208 545 26* 497 332† 287\$ 295 539 296 332† 400\$ 316\$ 515† 316\$ 458*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. Sc Charles Springs, Carbon-steel, Reconditioning  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. O. A.)  Maintenance for put in service fir half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Wi	8 211* 161* 161* 177 105 277 1105 277 1105 277 1105 277 277 277 277 277 277 277 277 277 27	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.).13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F.	296†	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.). Defense, National Buford, C. H. (Mech. Div.)	208 545 26* 497 332† 2878 295 539 296 332† 515† 400\$ 316\$ 458*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing.  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying. Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning.  Car Freight Construction (Mech. Div.) Design: Car foreman know details. Maintenance (C. D. O. A.) Maintenance, performance and epense, by O. A. Garber (C. D. C. A.) New, Number of, put in service fir half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization	g 211* . 161* . 187* . 197* . 108 . 474 st 333† . 474 st 541\$ . 278 . 541\$ . 223	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. T. E. A.)	296† 193* 528* 1 219* 216* 550* 75* 1 24* 1 157* 419* 469 21\$ 371* 364* 500	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.). Defense, National Budd's, Ralph, progress report. Buford, C. H. (Mech. Div.)	208 545 26* 497 332† 287\$ 287\$ 296 332† 515† 400\$ 316\$ 515† 316\$ 458* 457 8* 337*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and epense, by O. A. Garber (C. D. C. A.) New, Number of, put in service fire half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization Roof (see Roof)	g 211* . 161* . 187* . 197* . 108 . 474 st 333† . 474 st 333† . 278 . 541\$ . 223	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. T. E. A.) Cleveland Crane & Engineering Co., Mode	296† 193* 296† 193* 216* 216* 550* 75* 157* 1419* 449* 371* 331* 364*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 4008 5155† 3168 5158* 458*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing.  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying. Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. St. Charles Springs, Carbon-steel, Reconditioning.  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. C. A.) New, Number of, put in service fir half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Wiloughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized	78*. 415*. 202*  g 211*. 161*. 161*. 187*. 201*  277 110\$. 474  st. 333†. 278  - 420*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. & T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Clubs and Associations	296† 193* 296† 193* 216* 216* 550* 75* 157* 1419* 449* 371* 331* 364*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report	208 545 26* 497 332† 2878 295 539 296 332† 515† 400\$ 316\$ 458* 457 8* 337* .62*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushings, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171' Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and epense, by O. A. Garber (C. D. O. A.) New, Number of, put in service fire half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized Carboloy tools on machining work (G.	g 211* . 161* . 187* . 197* . 105 . 474 st 333† . 474 st 541\$ . 278 . 541\$ . 223 . 22\$ . 420*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.).13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. G. T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Clubs and Associations Car Dent Associations	296† 193* 528* 193* 216* 550* 75* 124* 157* 157* 1419* 371* 371* 364* 500 1421*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 400\$ 316\$ 515† 316\$ 458* 457 8* 337* .62*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and en pense, by O. A. Garber (C. D. C. A.)  New, Number of, put in service firm half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized Carboloy tools on machining work (G. W.) Car denartment, Importance of, in rail transparents.	g 211* . 161* . 187* . 197* . 108 . 480 . 474 st 333† . 278 . 541\$ . 223 . 22\$ . 420*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.).13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. G. T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Clubs and Associations Car Dent Associations	296† 193* 528* 193* 216* 550* 75* 124* 157* 157* 1419* 371* 371* 364* 500 1421*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 4008 316\$ 515† 316\$ 316\$ 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 518
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and en pense, by O. A. Garber (C. D. C. A.)  New, Number of, put in service firm half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized Carboloy tools on machining work (G. W.) Car denartment, Importance of, in rail transparents.	g 211* . 161* . 187* . 197* . 108 . 480 . 474 st 333† . 278 . 541\$ . 223 . 22\$ . 420*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.).13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. T. T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Clubs and Associations Car Dept. Assn. of St. Louis Speeds, Freight-train, Increasing, b A. W. Ayer Stock car idea, by D. V. Costello.	296† 193* 528* 193* 216* 550* 75* 124* 157* 157* 1419* 371* 371* 364* 500 1421*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.). Defense, National Budd's, Ralph, progress report. Buford, C. H. (Mech. Div.). 247, Commission, appointments Henry, R. S., Railroads ready. 511\$, Pelley, J. J., Railroads ready. 511\$, Pelley, J. J., Railroads ready. 511\$, Railway Business Assn. study. Ryerson, Edward L., Steel production ample Shop employment and Supervisors, Locomotive, Training. Transportation, Adequacy of Troop mobilization, Providing for Defector plates, Cold-air (M. B. A.). Delaware & Hudson Boiler, Fusion-welded (M. B. A.). 274, Coaches, Lightweight Locomotives, 4-6-6-4 Denver & Rio Grande Western Box car, Automobile Firebox materials, Service of, by Ray McBrian (M. B. A.) Depreciation orders, Equipment. 37, 170, 208, 297, DeSano, A. P., & Son, Radiac Type Mcut-off machine	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 4008 316\$ 515† 316\$ 316\$ 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 515† 316\$ 518
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushings, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. O. A.) New, Number of, put in service fire half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized Carboloy tools on machining work (G. W.) Car department, Importance of, in rail tran portation, by J. M. Symes (C. D. O. A.) Election of officers' Assn.	8 211* . 402*  8 211* . 161* . 167* . 201*  277 . 110\$ . 474 st. 333† . 474 st. 333† . 480 . 480 . 474 st. 333† . 474 st. 333† . 474	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Clubs and Associations Car Dept. Assn. of St. Louis Speeds, Freight-train, Increasing, b A. W. Ayer Stock car idea, by D. V. Costello. Car Foremen's Assn. of Chicago Braking trains under modern cond	296† 193* 528* 193* 216* 216* 550* 157* 157* 1419* 3469 218* 371* 364* 500 421*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Bud's, Ralph, progress report	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 4008 458* 457 8* 337* 5316 5316 5316 5316 5316 5316 5316 5316
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co. Bushings, Rod, Slotting, on a bushing.  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying. Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. St. Charles Springs, Carbon-steel, Reconditioning.  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. O. A.)  New, Number of, put in service fir half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Wiloughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized Carboloy tools on machining work (G. W.)  Car department, Importance of, in rail tran portation, by J. M. Symes (C. D. O. A. Car Dept. Officers' Assn. Election of officers Address by	g 211* . 415* . 415* . 202*  g 211* . 161* . 167* . 201*  . 277 . 110\$ . 474 st 333† . 278 . 541\$ . 1 223 . 22\$ . 420*	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine 'Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.).13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. & T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Club and Associations Car Dept. Assn. of St. Louis Speeds, Freight-train, Increasing, b A. W. Ayer Stock car idea, by D. V. Costello. Car Foremen's Assn. of Chicago Braking trains under modern cond	296† 193* 193* 219* 216* 216* 550* 75* 157* 157* 1419* 3469 331* 364* 500 421*  7 226* 157*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.). Defense, National Budd's, Ralph, progress report. Buford, C. H. (Mech. Div.) 247, Commission, appointments Henry, R. S., Pailroads ready 511\$, Pelley, J. J., Railroads ready 511\$, Pelley, J. J., Railroads ready Railway Business Assn. study Ryerson, Edward L., Steel production ample Shop employment and Supervisors, Locomotive, Training Transportation, Adequacy of Troop mobilization, Providing for Defector plates, Cold-air (M. B. A.). Delaware & Hudson Boiler, Fusion-welded (M. B. A.). Delaware & Riudson Boiler, Fusion-welded (M. B. A.). Denver & Rio Grande Western Box car, Automobile Firebox materials, Service of, by Ray McBrian (M. B. A.) Depreciation orders, Equipment 37, 170, 208, 297, 208, 297, 208, 297, 208, 297, 208, 207, Air transformer for spray-painting	208 545 26* 497 332† 287\$ 295 539 296 332† 400\$ 316\$ 515† 316\$ 458* 457 8* 337* .62* 518
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushings, Staybolt-hole, Lewis Bolt & Nut Co Bushings, Rod, Slotting, on a bushing  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying Locomotives, 4-8-4 (Montreal)171 Sash cleaning and glazing at Pt. S. Charles Springs, Carbon-steel, Reconditioning  Car  Freight Construction (Mech. Div.) Design: Car foreman know details Maintenance (C. D. O. A.) Maintenance, performance and expense, by O. A. Garber (C. D. O. A.) New, Number of, put in service fire half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized Carboloy tools on machining work (G. W.) Car department, Importance of, in rail tran portation, by J. M. Symes (C. D. O. A.) Election of officers' Assn.	g 211* . 161* . 161* . 187* . 197* . 105 . 474 st 333† . 278 . 541\$ . 223 . 22\$ . 420* . 473 . 473	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Clubs and Associations Car Dept. Assn. of St. Louis Speeds, Freight-train, Increasing, b A. W. Ayer Stock car idea, by D. V. Costello. Car Foremen's Assn. of Chicago Braking trains under modern cond	296† 193* 528* 193* 216* 216* 550* 75* 157* 1419* 3469 21\$ 371* 364* 421*  7 226\$ 157* 157* 16 157*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411, Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Bud's, Ralph, progress report	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 4008 515† 3168 515† 3168 458* 457 8* 337* 62* 531* 518 424*
Bureau of Safety (see Interstate Commerce Commission) Bushings, Link trunnion, Applying, by A. D. Hollis Bushing, Staybolt-hole, Lewis Bolt & Nut Co. Bushings, Rod, Slotting, on a bushing.  C  Canadian National Cars, Refrigerator, with overhead icin Lagging, Block, Method of applying. Locomotives, 4-8-4 (Montreal)171' Sash cleaning and glazing at Pt. S' Charles Springs, Carbon-steel, Reconditioning.  Car  Freight Construction (Mech. Div.) Design: Car foreman know details. Maintenance, Car foreman know details. Maintenance, performance and expense, by O. A. Garber (C. D. A.)  New, Number of, put in service fire half of 1940 Orders May 1, 1939, to May 1, 194 (Mech. Div.) Reconditioning Weight reduction, by V. R. Willoughby Passenger, modernization Roof (see Roof) Underframes (see Underframes) Carboloy Co., Cutting tools standardized Carboloy tools on machining work (G. W.) Car department, Importance of, in rail tranportation, by J. M. Symes (C. D. O. A. Car Dept. Officers' Assn. Election of officers Address by Garber, O. A., Car maintenance, peformance and expense	g 211* . 415* . 202*  g 211* . 161* . 187* . 197* . 105 . 474 st 333† . 474 st 328 . 228 . 420* . 420* . 473 . 473 . 474	Tractor with side-dump trailer Train, 17-car stainless-steel Chicago, Milwaukee, St. Paul & Pacific Cabooses with side observation bay win dows Cars, Box, 50-ton all-welded Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett Locomotives, 4-8-4 type Pipe and air-brake shop devices, by T. H. Birch Chicago, Rock Island & Pacific Medallion Rod, Piston, design, Safety features in Cincinnati Electrical Tool Co., Air Maste dust-collector unit Cincinnati Milling Machine Co., Hydro-Te milling machine Cinder cutting of firebox sheets, flues, tube and smokeboxes (M. B. A.) City of San Francisco wreck (Sou. Pac.) .13 Clean-out tool for water columns, by Arthu Havens Cleaning devices Locomotive and car, Thermo-pressure Vapor Car Heating Co. Tank-car unit, Oakite Products, Inc. Cleaning, Mechanical, of fine coal (R. F. T. E. A.) Cleveland Crane & Engineering Co., Mode J-12 Steelweld bending press Clubs and Associations Car Dept. Assn. of St. Louis Speeds, Freight-train, Increasing, b A. W. Ayer Stock car idea, by D. V. Costello. Car Foremen's Assn. of Chicago Braking trains under modern cond tions, by L. K. Sillcox Election of officers	296† 193* 528* 193* 216* 216* 550* 75* 157* 1419* 349* 349* 331* 500 421* 7226* 157* 157* 16* 334*	Davidson, Edward, Assistant chief inspector of locomotives Davies, G. M., Boiler questions and answers 25, 163, 204, 233, 330, 372, 411. Dearborn Chemical Co., Automatic blowoff system Decelostat operation (R. F. & T. E. A.) Defense, National Budd's, Ralph, progress report. Buford, C. H. (Mech. Div.) 247, Commission, appointments Henry, R. S., Pailroads ready 511\$, Pelley, J. J., Railroads ready \$11\$, Pelley, J. J., Railroads ready \$12\$, Pelley, J., Railroads ready	208 545 26* 497 332† 287\$ 295 539 296 332† 515† 4008 515† 3168 515† 3168 458* 457 8* 337* 62* 531* 518 424*

Journ

DeWalt Products Corp., Type GE woodwork-	400%	Fox, W. C., Unit pressures on oil-lubricated	2204	H	
ing machine Dickerman, W. C., elected to Ordnance	420*	bearings Francy, M. D., Damaging effects of water in	238‡	Hall, F. L., Tire-turning tool with cutter	
Diesel engines (see Engines, Diesel)	241	Fry, Lawford H., Question of Diesel costs	361‡ 361‡	control Hall, J. M.	75*
Door opener, Air-operated (I. C.) Doors, Hopper-car, Safe-ending (Ill. Cen.)	331*	Fuel Coal		Address (Mech. Div.)	249
Draft, Action of, on fuel bed, Moving pic-	206†	Equivalents of fuels and power (R. F. & T. E. A.)	501	federal inspector44, Hammer, Riveting, Air-operated, Ingersoll-	5118
Draft bill opposed by brotherhoods	488 374†	Fine, Mechanical cleaning of Selection of (R. F. & T. E. A.)	500 505	Rand Co	294*
A. D. Hollis	202*	Efficiency record, 1939 Economy, Chief dispatcher's views on,	170†	Hankins, F. W., Address (Mech. Div.) Hardy, C. J., elected to Ordnance League.	248 241
Drilling, Multiple, operations, (I. C.) Dri-Steam Valve Sales Corp., Improved steam	325*	by T. O. Weeks (R. F. & T. E. A.) 488,	5108	Harley, Edward, Determining boiler capacity	362‡ 417*
Driving box (see Box, Driving)	373*	Saving, by J. G. Crawford (R. F. & T. E. A.)	489	Harrischfeger Corp., Hansen welder Hartford Steam Boiler Inspection and Insur-	232
Dry pipe, Design of, in boilers without	27*	Fuel and Traveling Engineers' Assn. Meeting	487	ance Co., Failures of Diesel engine parts Havens, Arthur, Water-column clean-out tool Heat balances—Steam and oil burning loco-	371*
steam dome Duff-Norton Mfg. Co., 20-ton motor-operated	233	Address by Ellis, D. C. Henry, Robert S.	488	motives (R. F. & T. E. A.) Heater cars for use with Diesel-electric loco-	494
jack Dust collector unit, Air Master, Cincinnati	323*	Weeks, T. O488,	536 510§	motives (Ill. Cen.)	186*
Electrical Tool Co	156*	Election of officers	488	Heidel, E. H., Reinforcement of defective boiler shells	200*
Co	158*	Diesel-electric, Road foreman and, by Leo W. Powell	505	Hennessy Lubricator Co., Mechanical lubricator for A. A. R. journals.	554*
		Tests, at Selkirk, by W. E. Collins Turbine and condensing144*,	488 503	Henry, Robert S., Address (Mechanical Assns.)	536
E		Utilization	490	167, 206, 239, 295, 332, 374, 425, 515, Hinds, H. E., Enginehouse problems of the	555
Edna Brass Mfg. Co., Oil divider for lubri-	12.05	Boilers, Stationary, Coal-fired Brake equipment, Locomotive, No. 8-	503	present day (L. M. O. A.)	446
Education	413*	Coal equivalents of fuels and power	494* 501	Hitch, C. B., Improving railroad service (L. M. O. A.)	512§
Brake, Air, instructions for division officers	1908	Economy devices, Locomotive, New. Fuel records and statistics	488 501	many	362‡
Program of, for turret-lathe operators, Warner & Swasey Co.	242‡	Fuel saving, by J. G. Crawford	489	Hoeffer eight-spindle machine for drilling brake- and spring-rigging pins (I. C.) Hoists (see Material Handling Equip.)	325*
Warner medal	38	Coal Oil-burning	504 499	Hollis, A. D.	*****
Electro-Chemical Engrg. Corp., Automatic	26*	Steam consumption of locomotive auxiliaries, by E. E. Chapman	492	Applying link trunnion bushings Crosshead press fits	78* 25
blow-off system  Electro-Motive Corp., Diesel-electric freight locomotive	426†	Furnace Heat-treating and forging, Mahr Mfg.		Hooks (see Material Handling Equipment)	202*
locomotive Elliott, Edward C., Neglected high pressures (M. B. A.) Ellis, D. C., Address (R. F. & T. E. A.). Elwell-Parker Electric Co., Triple-lift fork	452	Co	417* 235*	Hopper castings, Ash pan	370
Ellis, D. C., Address (R. F. & T. E. A.) Elwell-Parker Electric Co., Triple-lift fork	488		200	measuring (U. P.)  Hose, All-metal, Seamlex Co	527 549*
Embrittlement in boiler	417*			Hot boxes (See Boxes, Journal) Hulson Grate Co., 12-in. Tuyere-type grate	412*
Mech. Div. report Schroeder, W. C. (M. B. A.) Employee relations: Shop Crafts to settle	263* 182*	G		Human life, High pressures of, by Edward C. Elliott (M. B. A.)	452
inviedictional disputes	126	Gage, Fillet weld, General Electric Co	165*	Human resources, Conservation of	510\$
Employment, Shop, and national detense	400	Gage for measuring drawbar lengths, by A. D. Hollis	202*		
Failures, by H. J. Vander	232	Garlock Packing Co., Flange-Jacks	166*	I	
				Illinois Central	
F.)202,	409 380*	of coal (R. F. & T. E. A.)	502	Car-shop kinks	28*
Turbo-charged (G. EAlco)		of coal (R. F. & T. E. A.)  Gear, Draft And riding comfort (N. Y. C.)  Repairing (Erie)	04*	Car-shop kinks	28* 186*
Turbo-charged (G. EAlco)  Engineering Societies Library, Microfilm copies  Engines, Oil, Supercharged, Waukesha-Hesselman (N. V. S. & W.)	380* 242 304*	of coal (R. F. & T. E. A.)  Gear, Draft And riding comfort (N. Y. C.)  Repairing (Erie)  Report (Mech. Div.)  Gear, Power reverse, Paxton-Mitchell Co.	04*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Fusineer Shon needs replacement, 2258.	380* 242	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp.	94* 553* 255	Car-shop kinks  Heater cars, for use with Diesel-electric locomotives, by H. Anderson  Jigs, fixtures and devices at Paducah, by G. H. Ramer	186*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 225\$, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining. 330,	380* 242 304* 359\$ 404* 362\$	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment	94* 553* 255 413* 380* 165*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner228*, Water, Drinking, device for cooling Water, Softened, for locomotives Ingersoll-Rand Co., Air-operated riveting	186* 324* 33*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Fusineer Shon needs replacement, 2258.	380* 242 304* 359§ 404* 362‡ 394	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc. Direct-current	94* 553* 255 413* 380* 165*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36†
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement 225\$, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining. 330, Exhibits Allied Ry. Supply Assn.	380* 242 304* 359§ 404* 362‡ 394	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car.	94* 553* 255 413* 380* 165* 416* 35* 420*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement, 225\$, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining330, Exhibits Allied Ry. Supply Assn	380* 242 304* 359§ 404* 362‡ 394	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firebox support and boiler waste sheets (Mech. Div.)	94* 553* 255 413* 380* 165* 416* 35* 420*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Heaselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 225\$, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining330, Exhibits Allied Ry. Supply Assn	380* 242 304* 359§ 404* 362\$ 394 399§	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.)	94* 553* 255 413* 380* 165* 416* 35* 420* 294*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn Value of, to the supervisor  F Failures, Crank pin (Mech. Div.) Failures, Magnaflux testing to prevent.	380* 242 304* 3598 404* 362\$ 394 399\$	of coal (R. F. & T. E. A.)  Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.)  Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current  General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.)  Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in by Wm. T.	94* 553* 255 413* 380* 165* 416* 420* 294* 271 416* 233*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Heaselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining330, Exhibits Allied Ry. Supply Assn	380* 242 304* 359§ 404* 362\$ 394 399§ 274 400§ 122†	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$ 418*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining	380* 242 304* 359\$ 404* 362\$ 394 399\$ 274 400\$ 122† 277	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446
Turbo-charged (G. EAlco)  Engineering Societies Library, Microfilm copies  Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.)  Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits  Allied Ry. Supply Assn.  Value of, to the supervisor  Failures, Crank pin (Mech. Div.)  Failures, Magnaflux testing to prevent. Fare, Two-cent. for eastern roads  Faus, H. W., Crank-pin failures (Mech. Div.)  Feedwater, Boiler, Chemical treatment of (M. B. A.)	380* 242 304* 359\$ 404* 362\$ 394 399\$  274 400\$ 1227 462	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 334†
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Heaselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining330, Exhibits Allied Ry. Supply Assn. Value of, to the supervisor  F  Failures, Crank pin (Mech. Div.) Failures, Magnaflux testing to prevent Fare, Two-cent, for eastern roads. Fare, Two-cent, for eastern roads. Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.). Feedwater heaters Coffin. Renewing tubes in a	380* 242 304* 359\$ 404* 362\$ 394 399\$ 274 400\$ 122† 277	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines, machines.	94* 553* 255 413* 380* 165* 416* 420* 294* 271 416* 233* 362‡ 422*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	324* 33* 36† 294* 271 330 540* 315\$ 418* 446 344†
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Eric, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn. Value of, to the supervisor  F  Failures, Crank pin (Mech. Div.) Failures, Magnaflux teating to prevent. Fare, Two-cent, for eastern roads Face, Two-cent, for eastern roads Feedwater, Boiler, Chemical treatment of (M. B. A.). Feedwater heaters Coffin, Renewing tubes in a. Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B.	380* 242 304* 359\$ 4042* 362* 394 399\$ 274 400\$ 122† 277 462 26*	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l)	94* 553* 255 413* 380* 165* 416* 35* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298‡
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Heaselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining	380* 242 304* 3598 404* 362‡ 394 3998  274 4008 122† 277 462 26* 271 459 276	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Boring, drilling and milling machines Gill, H. V., Design, operation and maintenance of Diesel-electric locomotives (L. M. O. A.) 131*, 202, 409 Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 419* 517†	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298‡ 485 262*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining	380* 242 304* 3598 404* 362‡ 394 3998  274 4008 122† 277 462 26* 271 459 276	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma-	94* 553* 255 413* 380* 165* 416* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 197* 517†	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298\$
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Eric, Handling device for punching steel plate Evaporation, Boiler, Determining. 330, Exhibits Allied Ry. Supply Assn. Value of, to the supervisor  F  Failures, Crank pin (Mech. Div.) Failures, Magnaflux teating to prevent. Fare, Two-cent, for eastern roads. Frare, Two-cent, for eastern roads. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.). Feedwater heaters Coffin, Renewing tubes in a. Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B. A.) Firebox Materials and construction (Mech. Div.) Materials, Service of, by Ray McBrian Sheets, Holding and welding. Sheets, Pitting and corrosion on (M. B. A.)	380* 242 304* 359\$ 404* 362\$ 394 399\$  274 400\$ 122† 277 462 26* 271 459 276 531* 373	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firehox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle Germany, Boiler explosions in, by Wm. T. Hoecker Gidlings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant, L. E., Quenched and tempered loco- motive forgings	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 4197* 4197* 4197* 4197* 4197*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298‡ 485 262*
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement, 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn. Value of, to the supervisor  F  Failures, Crank pin (Mech. Div.) Failures, Magnaflux testing to prevent. Fare, Two-cent, for eastern roads Feath, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.) Feedwater heaters Coffin, Renewing tubes in a Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B. A.) Firebox Materials and construction (Mech. Div.) Materials Service of, by Ray McBrian Sheets, Holding and welding. Sheets, Pitting and corrosion on (M. B. A.) Firing practice	380* 242 304* 3598 404* 362\$ 394 3998  274 4008 122† 277 462 26* 271 459 276 531* 373 457 453	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant, L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.)	94* 553* 255 413* 380* 165* 416* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 197* 517† 369* 219* 457	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 418* 446 446 334† 444 298‡ 485 262* 463
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn Value of, to the supervisor  Failures, Crank pin (Mech. Div.) Failures, Magnaffux testing to prevent. Fare, Two-cent, for eastern roads Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.) Feedwater heaters Coffin, Renewing tubes in a Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B. A.) Firebox Materials and construction (Mech. Div.) Materials, Service of, by Ray McBrian Sheets, Holding and welding Sheets, Fitting and corrosion on (M. B. A.) Firing practice Coal (R. F. & T. E. A.) Oil (R. F. & T. E. A.)	380* 242 304* 359\$ 404* 362\$ 394 399\$  274 400\$ 122† 277 462 26* 271 459 276 531* 373	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.)  Gisholt Machine Co. Dynetric balancing machines. Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grates Equalizing the flow of air through, by S. H. Acker	94* 553* 255 413* 380* 165* 416* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 197* 517† 369* 219* 457	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson Jigs, fixtures and devices at Paducah, by G. H. Raner	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298‡ 485 262* 463 150\$ 82 21\$
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn Value of, to the supervisor  Failures, Crank pin (Mech. Div.) Failures, Magnaffux testing to prevent. Fare, Two-cent, for eastern roads Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.) Feedwater heaters Coffin, Renewing tubes in a Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B. A.) Firebox Materials and construction (Mech. Div.) Materials, Service of, by Ray McBrian Sheets, Holding and welding Sheets, Fitting and corrosion on (M. B. A.) Firing practice Coal (R. F. & T. E. A.) Oil (R. F. & T. E. A.)	380* 242 304* 3598 404* 362\$ 394 3998  274 4008 122† 277 462 26* 271 459 276 531* 373 457 459 460	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines. Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grate bearers, Design of (M. B. A.) S. H. Acker Sloping, Why perpetuate Tuvere-type, 12-in. Hulson Grate Co.	94* 553* 255 413* 380* 165* 416* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 119* 517† 369* 219* 457	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 418* 446 446 334† 444 298\$ 485 262* 463 150\$ 82 21\$ 110 515
Turbo-charged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn Value of, to the supervisor  Failures, Crank pin (Mech. Div.) Failures, Magnaffux testing to prevent. Fare, Two-cent, for eastern roads Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.) Feedwater heaters Coffin, Renewing tubes in a Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B. A.) Firebox Materials and construction (Mech. Div.) Materials, Service of, by Ray McBrian Sheets, Holding and welding Sheets, Fitting and corrosion on (M. B. A.) Firing practice Coal (R. F. & T. E. A.) Oil (R. F. & T. E. A.)	380* 242 304* 3598 404* 362\$ 394 3998  274 4008 122† 277 462 26* 271 459 276 531* 373 457 459 460	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.)  Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grates  Equalizing the flow of air through, by S. H. Acker Sloping, Why perpetuate Tuyere-type, 12-in., Hulson Grate Co Gray accelerometer Gray. W. G., assistant mechanical engineer	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 19* 517† 369* 219* 457	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298\$ 485 262* 463 150\$ 82 21\$ 110 515
Turbocharged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn Value of, to the supervisor  Failures, Crank pin (Mech. Div.) Failures, Magnaffux testing to prevent. Fare, Two-cent, for eastern roads Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.) Feedwater heaters Coffin, Renewing tubes in a Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B. A.) Firebox Materials and construction (Mech. Div.) Materials, Service of, by Ray McBrian Sheets, Holding and welding Sheets, Pitting and corrosion on (M. B. A.) Firing practice Coal (R. F. & T. E. A.) Oil (R. F. & T. E. A.) Improper, and water circulation (M. B. A.) Flange-Jacks, Garlock Packing Co. Flies, Combating (C. & N. W.)	380* 242 304* 3598 404* 362\$ 394 3998  274 4008 122† 277 462 26* 271 459 276 531* 373 457 459 460	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant, L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grates Equalizing the flow of air through, by S. H. Acker Sloping, Why perpetuate Tuyere-type, 12-in., Hulson Grate Co Gray, W. G., assistant mechanical engineer, A. A. R.	94* 553* 255 413* 380* 165* 416* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 197* 517† 369* 219* 457	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298\$ 485 262* 463 150\$ 82 21\$ 110 515
Turbocharged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement, 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining. 330, Exhibits Allied Ry. Supply Assn. Value of, to the supervisor  F  Failures, Crank pin (Mech. Div.) Failures, Magnafux testing to prevent. Fare, Two-cent, for eastern roads. Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.). Feedwater heaters Coffin, Renewing tubes in a. Exhaust steam (Mech. Div.) Materials and construction (Mech. Div.) Materials Service of, by Ray McBrian Sheets, Holding and welding Sheets, Pitting and corrosion on (M. B. A.) Firipg practice Coal (R. F. & T. E. A.) Oil (R. F. & T. E. A.) Improper, and water circulation (M. B. A.) Flange-Jacks, Garlock Packing Co. Flies, Combating (C. & N. W.) Flue application (M. B. A.) Flue shop at Pen Argyl (L. & N. E.)	380* 242 304* 359§ 404* 362\$ 394 399§ 274 400§ 122† 277 462 26* 271 459 276* 373 457 453 504 499 460 166* 402* 468* 76*	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firehox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle Germany, Boiler explosions in, by Wm. T. Hoecker Gidlings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant, L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grates Equalizing the flow of air through, by S. H. Acker Slopping, Why perpetuate Tuyere-type, 12-in., Hulson Grate Co Gray accelerometer Gray, W. G., assistant mechanical engineer, A. A. R. Great Northern, Pendulum type cars Green Bay & Western, 60-ton drop-pit table Grinder, Crank-pin, Portable, U. S. Metallie	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 419* 517† 369* 219* 457	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298\$ 485 262* 463 150\$ 82 21\$ 110 515
Turbocharged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement, 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn Value of, to the supervisor  Failures, Crank pin (Mech. Div.) Failures, Magnaffux testing to prevent. Fare, Two-cent, for eastern roads Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.) Feedwater heaters Coffin, Renewing tubes in a Exhaust steam (Mech. Div.) Feedwater temperature, Increasing (M. B. A.) Firebox Materials and construction (Mech. Div.) Materials, Service of, by Ray McBrian Sheets, Holding and welding Sheets, Pitting and corrosion on (M. B. A.) Firing practice Coal (R. F. & T. E. A.) Oil (R. F. & T. E. A.) Oil (R. F. & T. E. A.) Improper, and water circulation (M. B. A.) Flange-Jacks, Garlock Packing Co. Flies, Combating (C. & N. W.) Flue shop at Pen Argyl (L. & N. E.) Forgings, Locomotive, Quenched and tempered, by L. E. Grant and J. W. Crossett	380* 242 304* 359\$ 404* 359\$ 404* 362\$ 394 399\$  274 400\$ 122† 277 462 26* 271 459 276 531* 373 457 453 504 499 460 166* 402* 417*	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant, L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grates Equalizing the flow of air through, by S. H. Acker Sloping, Why perpetuate Tuyere-type, 12-in., Hulson Grate Co Gray, W. G., assistant mechanical engineer, A. A. R. Great Northern, Pendulum type cars Green Bay & Western, 60-ton drop-pit table Grinder, Crank-pin, Portable, U. S. Metallic Packing Co. Grinding, Car-wheel, effects economy	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 1197* 419* 1219* 126† 27* 419* 1518*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 315\$ 418* 446 446 334† 444 298\$ 485 262* 463 150\$ 82 21\$ 110 515
Turbocharged (G. EAlco)  Engineering Societies Library, Microfilm copies  Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.)  Equipment, Shop, needs replacement. 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits  Allied Ry. Supply Assn  Value of, to the supervisor  Failures, Magnaflux testing to prevent. Fare, Two-cent, for eastern roads  Faus, H. W., Crank-pin failures (Mech. Div.)  Feedwater, Boiler, Chemical treatment of (M. B. A.).  Feedwater, Boiler, Chemical treatment of (M. B. A.).  Feedwater heaters  Coffin, Renewing tubes in a Exhaust steam (Mech. Div.)  Feedwater temperature, Increasing (M. B. A.)  Firbox  Materials and construction (Mech. Div.)  Materials and construction (Mech. Div.)	380* 242 304* 359\$ 404* 359\$ 404* 362\$ 394 399\$  274 400\$ 122† 277 462 26* 271 459 276 531* 373 457 453 504 499 460 166* 402* 417*	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co. General Electric Co. Diesel engines, 660- and 1,000-hp. Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firebox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle. Germany, Boiler explosions in, by Wm. T. Hoecker Giddings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines. Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grates Equalizing the flow of air through, by S. H. Acker Sloping, Why perpetuate Tuyer-etype, 12-in., Hulson Grate Co Gray, W. G., assistant mechanical engineer, A. A. R. Great Northern, Pendulum type cars Green Bay & Western, 60-ton drop-pit table Grinder, Crank-pin, Portable, U. S. Metallic Packing Co. Grinding machines (see Machine tools) Grinding machines (see Machine tools)	94* 553* 255 413* 380* 165* 416* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 197* 517† 369* 219* 457  140* 109\$ 412* 419* 516† 27* 419* 151\$ 400*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 418* 446 446 334† 444 298‡ 485 262* 463 150\$ 82 21\$ 110 515 518
Turbocharged (G. EAlco) Engineering Societies Library, Microfilm copies Engines, Oil, Supercharged, Waukesha-Hesselman (N. Y. S. & W.) Equipment, Shop, needs replacement, 2258, Erie, Handling device for punching steel plate Evaporation, Boiler, Determining 330, Exhibits Allied Ry. Supply Assn Value of, to the supervisor  F  Failures, Crank pin (Mech. Div.) Failures, Magnaflux testing to prevent. Fare, Two-cent, for eastern roads Faus, H. W., Crank-pin failures (Mech. Div.) Feedwater, Boiler, Chemical treatment of (M. B. A.) Feedwater heaters Coffin, Renewing tubes in a Exhaust steam (Mech. Div.) Materials sand construction (Mech. Div.) Materials Service of, by Ray McBrian Sheets, Holding and welding Sheets, Pitting and corrosion on (M. B. A.) Firing practice Coal (R. F. & T. E. A.) Oil (R. F. & T. E. A.) Improper, and water circulation (M. B. A.) Flange-Jacks, Garlock Packing Co. Flies, Combating (C. & N. W.) Flue application (M. B. A.) Flue shop at Pen Argyl (L. & N. E.)	380* 242 304* 359\$ 404* 359\$ 404* 362\$ 394 399\$  274 400\$ 122† 277 462 26* 271 459 276 531* 373 457 453 504 499 460 166* 402* 417*	of coal (R. F. & T. E. A.) Gear, Draft And riding comfort (N. Y. C.) Repairing (Erie) Report (Mech. Div.) Gear, Power reverse, Paxton-Mitchell Co General Electric Co. Diesel engines, 660- and 1,000-hp Gage, Fillet-weld Speed-variator equipment Weld recorder Welder, Arc, Direct-current General Steel Castings Corp. Truck, Four-wheel passenger-car. Test: Furnace and firehox support and boiler waste sheets (Mech. Div.) Geometric Tool Co. Grinder, No. 20 chaser Threading machine, Double-spindle Germany, Boiler explosions in, by Wm. T. Hoecker Gidlings & Lewis Machine Tool Co., Bor- ing, drilling and milling machines. Gill, H. V., Design, operation and mainte- nance of Diesel-electric locomotives (L. M. O. A.) Gisholt Machine Co. Dynetric balancing machines Multiple cutter turner Glazing methods (Can. Nat'l) Goetz-Voss Corp., Portable crank-pin grinder Goodrich awards Grand Trunk Western, Carboloy tools on ma- chining work Grant, L. E., Quenched and tempered loco- motive forgings Grate bearers, Design of (M. B. A.) Grates Equalizing the flow of air through, by S. H. Acker Slopping, Why perpetuate Tuyere-type, 12-in., Hulson Grate Co Gray accelerometer Gray, W. G., assistant mechanical engineer, A. A. R. Great Northern, Pendulum type cars Green Bay & Western, 60-ton drop-pit table Grinder, Crank-pin, Portable, U. S. Metallie	94* 553* 255 413* 380* 165* 420* 294* 271 416* 233* 362‡ 422* 437* 158* 424* 19* 517† 369* 219* 457  140* 110* 110* 121* 350* 298* 126* 127* 419* 151\$ 409*	Car-shop kinks Heater cars, for use with Diesel-electric locomotives, by H. Anderson	186* 324* 33* 36† 294* 271 330 540* 418* 446 446 334† 444 298‡ 485 262* 463 150\$ 82 21\$ 110 515 518

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Journal boxes (see Boxes, Journal) Journal brass (see Brass, Journal)		Locomotive Maintenance Officers' Assn.— (Continued) Papers—(Continued) Machinery and tools in locomotive re-		Mileages, Locomotive, Average, on ten roads (R. F. & T. E. A.)	490
K		pairs, Use of, by D. J. Sheehan Railroad service, Improving, by C.	435	Cen.) Miner accelerometer	228 349*
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tion, Air-brake instructions for division officers	1915	Meeting	432* 513\$	Eagle trains "Modern Pioneers" in railroading	87* 125
		Locomotives	3133	Monopoly minds in employee and customer	5429
L		Combustion-turbine, Proposed (R. F. & T. E. A.)	144*	Moving pictures—Action of draft on fuel bed	488
Labor and material prices (Mech. Div.)	269	Diesel-electric (see also Trains, High- speed)		in firebox (R. F. & T. E. A.)	
Lagging, Block, Method of applying (Can. Nat'l)	161*	Switchers 660- and 1,000-hp. (Alco)	379*	off value	422*
Landis Machine Co., Hand-feed adapter for	79*	660- and 1,000-hp. (Baldwin) 2-8-2, M. & St. L., with stainless-steel	56*	N	
turret-lathe head Lapping outfit, Dexter, Leavitt Machine Co. Lathe, Turret, head, Hand-feed adapter for,	424*	boiler jacket	398*		
Landis Machine Co. Lathe, Turret, operators' service, Warner &	79*	ratios)	44	Nathan Manufacturing Co., Type 4000 injec-	540*
Swasey Co. Lathes (see Machine Tools)	242†	Can. Nat'l (Montreal)171†, C. M., St. P. & P. (Baldwin)	187* 216*	National Defense (see Defense, National) New York Air Brake Co., Fiftieth birthday New York Central	3585
Lathes, Engine, Superfinishing heads for, Foster Machine Co.	419*	Table of general dimensions and boiler ratios	104	Crank-pin failures, by H. W. Faus (Mech. Div.)	277
Laying out shoes and wedges on a vertical turret lathe	545*	2-8-8-4, Southern Pacific (Lima) 4-6-6-4, D. & H. (Alco)	337*	Moving pictures action of draft on fuel bed in firebox	488
Leavitt Machine Co., Dexter lapping outfit Lehigh & New England	424*	Ten-coupled (General dimensions and boiler ratios)	45	Tests	258*
Driving-box work Flue repair shop at Pen Argyl	407* 76*	Long runs, Locomotive maintenance for, by Lee Robinson (L. M. O. A.) Lubricants and lubrication (C. D. O. A.)	443 477	Gear, Draft, recoil94*, Locomotive, at Selkirk Test rack for steam-heat connectors	488 196*
Lehigh Valley Apprentices honored	557†	Lubricating devices Oil divider, Edna Brass Mfg. Co	413*	New York, New Haven & Hartford, De- mounting wheels at Readville	70*
Hopper cars converted for cement	318* 415*	Spee-D filler neck, Reliance Machine & Stamping Works	415*	New York, Susquehanna & Western, Air- cooled rail cars (Alco)	303*
Lewis Bolt & Nut Co., Staybolt-hole bushing Lewis-Shephard Sales Corp., Open-end hy- draulic lift truck	422*	Lubrication Car and locomotive (Mech. Div.)	250	Norris, E. F., Monopoly mind in customer relations	555†
draulic lift truck Lighting units, Tufflite, Westinghouse Elec. & Mfg. Co. Lincoln, James F., Arc Welding Foundation	423*	Diesel-engine (A. T. & S. F.)410, Lubricator, Mechanical, for A. A. R. jour-	439	Northern Pacific Grates, Locomotive, by S. H. Acker	140*
industrial progress award program	82	nals, Hennessy Lubricator Co Lumber, Car, Treated wood for	554* 358§	Hopper cars, 50-ton (ACF) Northwest Carmen's Assn. (see Clubs and	137*
Loading rules (see Rules, Loading) Loadings, Revenue freight-car (1937-40)	425	200001,0001		Associations) Norton Company, Multipurpose grinder	79*
Availability	225§	M		Nut, Self-locking, Boots, Scoville Mfg. Co.	237*
Boilers (see Boilers, Locomotive) Construction (Mech. Div.)	271*	Machine Tools		0	
Cylinders (see Cylinders) Diesel-electric	361‡	Boring, drilling and milling machines, Giddings & Lewis Machine Tool Co.	422*		2644
Cost study	437*	Grinding machines Chaser, No. 20, Geometric Tool Co Disc, Double-end, Standard Electrical	416*	Oakite Products, Inc., Tank-car cleaning unit O'Brien, R. A., Intercrystalline cracks in locomotive boilers (Mech. Div.)	364* 262*
Handling the, by Leo W. Powell (R. F. & T. E. A.)	505	Tool Co	423* 79*	Obsolescence, Locomotive, Combating, by J. L. Ryan (A. S. M. E.)	310*
Progress, 15 years of Steam and, comparisons 228, 658,	238 238‡	Lathes Cutter, Multiple, turner for, Gisholt	• • •	Oil divider for lubricating system, Edna	413*
Switcher savings (Pacific Ry. Club) Grates (see Grates)	81	Machine Co. Turret, in toolrooms	424* 112*	Brass Mfg. Co	286*
Horsepower (see Horsepower) Inspection report, Bureau of Locomotive		Turret, Ram type, Warner & Swasey	166*	Olds, Irving S., Steel industry ready to grow Operation, Locomotive (see Locomotive opera-	519
Inspection	52* 310*	Co. Milling Machines Hydro-Tel, Cincinnati Milling Machine		tion) Ostlind Valve Inc., Steam valve with a spin-	
Maintenance Diesel-electric, by H. V. Gill (L. M.		Co	419*	ning disc	165*
O. A.) For long runs, by Lee Robinson (L.	437*	chine Tool Co	424*	P	
M. O. A.) Oil-electric, Development and use of	443	Use of, by D. J. Sheehan (L. M. O. A.)	435 400§	•	
Mech. Div.)272, Operation	288	Magnaflux testing Magnaflux Corp., Portable inspection equipment	418*	Painting Report (C. D. O. A.)	483
Double-heading forbidden Diesel-electric	206†	Mahr Mfg. Co., Heat-treating and forging furnace	417*	Underframes with car cement (Ill. Cen.) Painting equipment	31*
C. & N. W. "400's" complete 300,- 000 miles	333†	Maintenance, Locomotive (see Locomotive maintenance).		Air transformer for spray-painting process, DeVilbiss Co.	199*
Gill, H. V., (L. M. O. A.) Handling the Diesel-electric, by Leo W. Powell (R. F. & T. E. A.)	437*	Maintenance, Car (see Car Maintenance) Martin stoker	412*	Spray gun for decorative finishing, De- Vilbiss Co. Spray pits at Centralia (III. Cen.) Patents: Modern Pioneers in railroading	27*
Performance, B. & O. Diesel-electric	505 169†	Master Boilermakers Assn. (see Boiler- makers' Assn.)		Patents: Modern Pioneers in railroading	125
Piston rods (see Rods, Piston)	310	Material handling equipment Cranes	554*	Patterson, W. J., Address (Mech. Div.) Pawling & Harnischfeger Model 255 crawler	554*
Purchases, 1934-1939 (I. C.) Steam and Diesel, comparisons 22\$, 65\$,		Crawler, P. & H. Model 255 Tractor, with pneumatic tires, Silent Hoist Winch & Crane Co Hoist, Electric, Type WFBC, Whiting	418*	Paxton-Mitchell Co., Power reverse gear Pearce, E. S., Journal-box temperature	413*
Tenders (see Tenders) Turbine and condensing (R. F. & T.	2304	Hoist Which & Clane Co	423*	67 . 69*.	2381
E. A.) Utilization, Locomotive (R. F. & T. E.	503	Corp. Hooks, Lifting, for applying steel car sheets (Ill. Cen.)	29*	Pelley, J. J. 1940 outlook	39 517
Locomotive Finished Materials Co., Martin	490	Jacks Journal, Portable Plating & Equip-		Pension estimates	10/1
stoker	412*	ment Co	199* 416*	Performance, Locomotive (see Locomotive performance) Pioneer Zephyr wreck	110
Address by Ellis, D. S	472	20-ton motor-operated, Duff-Norton Mfg. Co.	323*	Pioneer Zephyr wreck	125
Garber, O. A. Henry, Robert S.	472 536	Tractor with side-dump trailer (C. B. & Q.)	367*	Pitting on firebox sheets (M. B. A.) Platform for use in applying lagging (Ill.	457
Sheehan, D. J. Advisory board	472	Trucks Hydraulic, Open-end, Lewis-Shephard		Cen.) Portable Plating & Equipment Co., Atlas journal jack Powell, Leo W., Road foreman and Diesel-	229
Election of officers	433	Sales Corp. Triple-lift fork, Elwell-Parker Electric	422*	journal jack	199
Air-brake maintenance, future, Stew- art, J. P.	440	McBrian, Ray, Service of firebox materials	417*	electric locomotive (R. F. & T. E. A.) Press fits, by A. D. Hollis Pressed Steel Car Co., Cor-Ten steel pas-	505 25
Enginehouse problems of the present		(M. B. A.)	75*	Pressed Steel Car Co., Cor-Ten steel pas- senger coach Pressures, High, Some neglected, by Edward	382*
day, by Hinds, H. E.  Locomotive, Diesel-electric, design,		Meister, C. L., Igloo sand drying house		C. Elliott (M. B. A.)	420
operation and maintenance, by H.				not be to the second of the se	
V. Gill Locomotive maintenance for long runs, Robinson, Lee	437*	(A. C. L.) Memberships, Association, Building Microfilm copies at Engineers' Library Microphones at conventions	242	Prices for labor and material (Mech. Div.) Priest, H. M., Designing for high-tensile- steels	

\* Illustrated article; \$ editorial; † short, non-illustrated article or note; ‡ communication.

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Pullman Co.	0414	Schroeder, W. C.	182*	Spieth, W. S., Truck spring snubbers	175*
Coach-sleeper, triple-deck	241* 374†	Embrittlement in boilers (M. B. A.) Intercrystalline cracks in locomotive boil-	182"	(Northwest Carmen's Assn.)	418*
Coach sleepers stimulate business Dept. of Justice suit		ers (Mech. Div.)	262*	Spray-painting equipment (see Painting	410
Punching steel plate, Handling device for		Scoville Mfg. Co., Boots self-locking nut Seamlex Co., All-metal hose	237*	equipment)	
(Erie)	404*	Seamlex Co., All-metal hose	549*	Spring band, Locomotive, Standard Brake	
(Erie) Pyle-National Co., Multi-vent research labora-				Shoe & Fdry, Co	415*
tory	335	in locomotive repairs (L. M. O. A.)	435	Spring, Truck, snubbers, by W. S. Spieth	175*
		Shoes and wedges, Laying out, on a vertical turret lathe	545*	Springs, Carbon-steel, Reconditioning (Can. Nat'l)	201*
		Shop crafts to settle jurisdictional disputes.	126	Standard Brake Shoe & Fdry. Co., Locomo-	201
Q		Shop, Flue repair, at Pen Argyl (L. & N.			415*
*		E.)	76*	tive spring band	
Quinn, M. A., The master boiler maker (M.		Shop kinks		grinder	423*
B. A.)	451	Box, Driving, work at Pen Argyl (L. &	407#	Staybolt hole bushing, Lewis Bolt & Nut Co.	415*
Quiz on Railroads and Railroading	426†	N. E.) Brake, Air, shop devices (C. M., St.	407*	Staybolts	456*
		P. & P.)	550*	Applying, by welding (M. B. A.)	25
		Bucking bar for steel car work	322*	Unequally-spaced, Area supported by	372*
R		Clean-out tool for water columns, by		Calculating area supported by	
7,		Arthur Havens	371*	by E. E. Chapman (R. F. & T. E. A.)	492
Rack, test, for steam-heat connectors (N.		Cotter, Spring, for lifting scale, by Frank Bentley	371*	Steam dryer, Improved, Dri-Steam Valve	373*
Y. C.)	196*	Countersinking grease holes (Ill. Cen.)	231*	Sales Corp	3/3"
Rail care (see Care Passenger)		Crane, Cantry, for straightening hopper-		Steam-heat)	
Railroad, A, What is	542\$	car top rails (Ill. Cen.)	28*	Steam's future—A warning?	5138
Railroad service, Improving, by C. B. Hitch	5128	Device for		Steel industry ready to grow, Irving S. Olds	519
(L. M. O. A.)	2708	Applying Walschaert link trunnion		Steel production ample	515
Pailwave and the Fauinment and Sun-		bushings by screw pressure, by A. D. Hollis	78*	Steels High-tensile	
ply Industry	557	Checking wheel concentricity	405*	And weight reduction, by V. R. Wil-	
Transportation and National Defense	332†	Cooling drinking water (Ill. Cen.)	33*	loughby	223
Raner, G. H., Shop jigs, fixtures and de-	2249	Handling, punching steel plate (Erie)	404*	Designing for, by H. M. Priest	15*
ply Industry	324*	Holding locomotive brasses for machin-	2268	Tool, Red Tiger, Bethlehem Steel Co	236*
(Pac. Ry. Club)	81	ing (I. C.)	326*	USS Cor-Ten vs. Copper	60* 440
Recorder, train-signal, automatic, Valve Pilot		machine (Ill. Cen.)	232	Stewart, J. P., Future air-brake maintenance Stoker screws, Flame-hardened	1918
CUID	285*	Holding main crank pins while drill-		Stokers, Locomotive	1718
Refrigeration: Temperature comparisons in	** *	ing center holes (Ill. Cen.)	228*	Berkley Machine Works & Fdry. Co	414*
overhead ice and conventional end-bunker	215	Locating guides with multiple-bearing	1105	Martin, Locomotive Finished Materials	
cars (Can. Nat'l)	213.	crossheads	113* 331*	Co.	412*
D filler neck	415*	Door opener, Air-operated (I. C.) Doors, Hopper-car, Safe ending (Ill.	331	Stone, Royal A., Judge, Collective bar-	515†
D filler neck Repair, Car, yards, Walkways for	119*	Cen.)	29*	Strahl formula for determining capacity of	3134
Repairs, Coupler and draft-gear (Erie)	553*	Drilling brake- and spring-rigging pins		steam locomotive	45
Repairs, Freight-Car	E418	(I. C.)	325*	Straightening car parts (Ill. Cen.)	28*
Hopper cars converted for cement (L.	5419	Drilling, Multiple, operations (I. C.)	325*	Supervisors	
V.)	318*	Furnace, Rivet-heating	235*	Foremen	F110
Labor-saving devices for, at Centralia		Gage for measuring drawbar lengths, by A. D. Hollis	202*	Enginehouse, Job of the	5118
(Ill. Cen.)	28*	Grip, Emergency, for air motor throttle		Road, and Diesel-electric locomotive,	1108
Refrigerator car underframes	119*	Hooks for handling		by Leo W. Powell (R. F. & T.	
Repairs, Locomotive Diesel: Why are costs high?	1918	Applying driving tires	231*	E. A.)	505
Jigs, fixtures and devices for making, at	1518	Driving boxes	231*	Should have a chance	1098
Paducah (Ill. Cen.)	228*	Jig for	20	Locomotive, Training Sundstrand Machine Tool Co., Hydraulic	3168
Machinery and tools, Use of, in, (L.		Drilling gib-bolt holes in a crosshead		Rigidmil	424*
M. U. A.)	435	(Ill. Cen.)	228*	Switching movements, Controlling (R. F. &	124
Republic Steel Corp. stainless steel plant at	124	Holding crown brasses on a vertical		T. E. A.) Symes, J. M., The car department in rail	506
Massillon, Ohio	144	turret lathe (I. C.)	326*	Symes, J. M., The car department in rail	
tional Co	335	Holding radius-bar guides (Ill. Cen.) Lifting driving-wheel tires (Ill. Cen.)	325* 230*	transportation	473
Research, What, has done for passenger serv-		Milling machine. Frame pedestal-iaw	230	Symington accelerometer	350*
ice, by C. E. Smith	555†	Milling machine, Frame pedestal-jaw	228*		
Research program axles, crank nine and	274	Pipe shop devices (C. M., St. P. & P.)	550"	T	
bearings (Mech. Div.)	274	Platform for use in applying lagging			
Co	422*	(Ill. Cen.)	231*	Tapgun, No. 8, Black & Decker Mfg. Co	419*
Retirement Board personnel	208	Punching steel plate, Handling device for (Erie)	404*	Taxes and subsidized competition, by Robert	1.00
Reverse gear (see Gear, Reverse)		Saw, Cold, for cutting off worn ends of		S. Henry	538
Rheostat, Water, for testing Diesel locomotives, by C. C. Whittaker	162*	nopper-car doors (III. Cen.)	29"	Taylor, Morris P., Semi-crosspatancing driv-	200#
Ripley, C. T. Wheel maintenance (C. D.	102	Slotting rod bushings on a shaper		ing wheels (Sou. Pac.)	389*
U. A.I	482	Straightening car parts (Ill. Cen.)	28*	conventional end-bunker refrigerator cars	
Rivet heating furnace Riveting hammer, Air-operated, Ingersoll-	235*	Test rack for steam heat connectors	196*	(Can. Nat'l)	215
Riveting hammer, Air-operated, Ingersoll-		Tongs for handling rivets	235*	Tempin, R. L., Longstreth medal	241
Rand Co	294* 463	Tool for cutting fibre liners (Ill. Cen.).	. 228	Tender cistern, maintenance (M. B. A.)	471
Rod, Piston	403	Truing worn multiple-wear guides (I		Tenders, 14-wheel, Union Pacific	386*
Design, safety features in (C. R. I. & P.		C.)			
Parter, Hydraulic, Sperry Products, Inc.	24*	Wheeling locomotives (III Cen )	325*	Machine, Templin 3,000,000-lb., Alumi-	
	421*	Wheeling locomotives (Ill. Cen.) Wheel stick eliminates journal damage.	325* 324* 322*	Machine, Templin 3,000,000-lb., Aluminum Co. of America	124*
Roesch, F. P., Cinder cutting and honey-	421*	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O	324* 322*	num Co. of America	400\$
Parter, Hydraulic, Sperry Products, Inc. Roesch, F. P., Cinder cutting and honey-combing (M. B. A.)	421* 469	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.)	324* 322* 475	num Co. of America	
Rolling stock being reconditioned	421* 469 541\$	Wheel stick eliminates journal damage.  Shop operation—electrical welding (C. D. O. A.)	324* 322* . 475	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test)	400\$
Roof, Refrigerator car, Single-board	421* 469 541\$ 121*	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.)	324* 322* . 475	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests	400\$
Rolling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.)	421* 469 541\$ 121*	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.)	324* 322* . 475	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.)	400\$ 196* 47* 94*
Rolling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.)	421* 469 541\$ 121* 265	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moderi conditions (Car Foremen's Assn. of Chi	324* 322* 475 72* 517†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech, Div.)	400\$ 196* 47* 94* 258*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A.	421* 469 541\$ 121* 265 484	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moders conditions (Car Foremen's Assn. of Chicago)	324* 322* 475 72* 517†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler	400\$ 196* 47* 94* 258*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A.	421* 469 541\$ 121* 265 484	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moderi conditions (Car Foremen's Assn. of Chi cago) Slotting rod hushings on a shaper	324* 322* 475 . 475 . 517†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.)	400\$ 196* 47* 94* 258*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel	421* 469 541\$ 121* 265 484 261	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moderi conditions (Car Foremen's Assn. of Chi cago) Slotting rod hushings on a shaper	324* 322* 475 . 475 . 517†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selbitk (N. Y. C.)	400\$ 196* 47* 94* 258* 271 140* 488
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explo-	421* 469 541\$ 121* 265 484 261	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moderi conditions (Car Foremen's Assn. of Chi cago) Slotting rod hushings on a shaper	324* 322* 475 . 475 . 517†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selbitk (N. Y. C.)	400\$ 196* 47* 94* 258* 271 140* 488
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water	421* 469 541\$ 121* 265 484 261 314	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moders conditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service. Smith, R. H., Locomotive heart of railroads along the service of the service	324* 322* 475 72* 517† 240 202* 555†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selbitk (N. Y. C.)	400\$ 196* 47* 94* 258* 271 140* 488
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explo- sions due to low water	421* 469 541\$ 121* 265 484 261 314	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moders conditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service. Smith, R. H., Locomotive heart of railroads along the service of the service	324* 322* 475 72* 517† 240 202* 555†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkitk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explo- sions due to low water	421* 469 541\$ 121* 265 484 261 314	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moders conditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service. Smith, R. H., Locomotive heart of railroads along the service of the service	324* 322* 475 72* 517† 240 202* 555†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat') Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.)	400\$ 196* 47* 94* 258* 271 140* 488
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div.  Running boards, Slotted, Alan Wood Steel Co.  Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. L.S. F.) Ryerson, Edward L., Steel production ample	421* 469 541\$ 121* 265 484 261 314	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Silicox, L. K., Braking trains under moder conditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service. Smith, R. H., Locomotive heart of railroad plant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.)	324* 322* 475 72* 517† 240 202* 555†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  233*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div.  Running boards, Slotted, Alan Wood Steel Co.  Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. L.S. F.) Ryerson, Edward L., Steel production ample	421* 469 541\$ 121* 265 484 261 314	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moderic conditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done to passenger service Smith, R. H., Locomotive heart of railroaplant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Pre	324* 322* 475 517† 202* 555† 170† 175*	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C. Beaver Pipe Tools, Inc.	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  233* 423*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div.  Running boards, Slotted, Alan Wood Steel Co.  Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample	421* 469 541\$ 121* 265 484 261 314	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moderi conditions (Car Foremen's Assn. of Ch. cago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service Smith, R. H., Locomotive heart of railroa- plant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Pre-	324* 322* 475 72* 517† 1 240 202* 555† 1 170† 1 175*	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tools, Inc. Tire-turning tool with cutter control, by F.	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  233* 423*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explo- sions due to low water	421* 469 541\$ 121* 265 484 261 314	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done to passenger service Smith, R. H., Locomotive heart of railroadplant Smooke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Proventing, by Frank E. Russell City of San Francisco wreck	324* 322* 475 72* 517† 240 202* 555† 1555† 175*	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F.	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  233* 423*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample	421* 469 541\$ 121* 265 484 261 314 238\$ 310* 515†	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done to passenger service Smith, R. H., Locomotive heart of railroadplant Smooke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Proventing, by Frank E. Russell City of San Francisco wreck	324* 322* 475 72* 517† 240 202* 555† 1555† 175*	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets	400\$ 196*  47* 94** 258* 271 140* 488 215 60* 175* 345*  233** 423*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample  S Safety awards (Harriman medals) St. Louis-San Francisco	421* 469 541\$ 121* 265 484 261 314 238\$ 310* 515†	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done to passenger service Smith, R. H., Locomotive heart of railroaplant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Preventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.).	324* 322* 475 72* 517† 240 202* 555† 1555† 170† 175* 238\$ 21\$ 270	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F.	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  75**
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample  S Safety awards (Harriman medals) St. Louis-San Francisco	421* 469 541\$ 121* 265 484 261 314 238\$ 310* 515†	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Ch. Cago) Slotting rod bushings on a shaper Smith, C. E., What research has done for passenger service Smith, R. H., Locomotive heart of railroadplant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Proventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.) Spee-D filler neck, Reliance Machine Stamping Works	324* 322* 475 72* 517† 240 202* 555† 170† 175* 238\$ 218 270 415*	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear (N. Y. C.) Draft-gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkitk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F. & T. E. A.) Trains, Freight, Colors for	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  233* 423*  75* 505
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div.  Running boards, Slotted, Alan Wood Steel Co.  Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. L.S. F.) Ryerson, Edward L., Steel production ample  S  Safety awards (Harriman medals) St. Louis-San Francisco Grates, Locomotive, Equalizing flow of air through, by S. H. Acker.	421* 469 541\$* 265 484 261 314 238\$* 310* 515†	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done to passenger service Smith, R. H., Locomotive heart of railroadplant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Preventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.). Spee-D filler neck, Reliance Machine Stamping Works Speed pressure control (R. F. & T. E. A.	324* 322* - 475 - 72* - 517† - 240 - 202* - 555† - 170† - 175* - 238± - 218 -	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F. & T. E. A.) Trains, Freight, Colors for Trains, High-speed	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  233* 75* 235*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample  S  Safety awards (Harriman medals) St. Louis-San Francisco Grates, Locomotive, Equalizing flow of air through, by S. H. Acker. Locamotive obsolescence Competitions by	421* 469 541\$* 265 484 261 314 238\$* 310* 515†	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under moderi conditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service Smith, R. H., Locomotive heart of railroadplant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Proventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.). Spee-D filler neck, Reliance Machine Stamping Works Speed pressure control (R. F. & T. E. A.	324* 322* 475 72* 517† 240 202* 555† 175* 175* 238\$ 175* 238\$ 175* 270 415* 498	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F. & T. E. A.) Trains, Freight, Colors for Trains, High-speed	400\$ 196*  47* 94* 258*  271 140* 488 215 60* 175* 345*  233* 75* 235*
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample  S  Safety awards (Harriman medals) St. Louis-San Francisco Grates, Locomotive, Equalizing flow of air through, by S. H. Acker. Locamotive obsolescence Competitions by	421* 469 541\$* 265 484 261 314 238\$* 310* 515†	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done to passenger service Smith, R. H., Locomotive heart of railroaplant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Preventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.) Spee-D filler neck, Reliance Machine Stamping Works Speed pressure control (R. F. & T. E. A. Speed-variator equipment, General Electrical	324* 322* 475 72* 517† 240 202* 555† 175* 175* 238\$ 175* 238\$ 175* 270 415* 498	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F. & T. E. A.) Trains, Freight, Colors for Trains, High-speed C. B. & Q., 17-car stainless-steel Coverdale & Colpitts report on K. C. S. L. & A Southern Belle	400\$ 196* 47* 94* 258* 271 140* 488 215 60* 345* 233* 423* 75* 505 122† 296† 127
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample  S  Safety awards (Harriman medals) St. Louis-San Francisco Grates, Locomotive, Equalizing flow of air through, by S. H. Acker. Locamotive obsolescence Competitions by	421* 469 541\$* 265 484 261 314 238\$* 310* 515†	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service Smith, R. H., Locomotive heart of railroad plant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Preventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.). Spee-D filler neck, Reliance Machine Stamping Works Speed pressure control (R. F. & T. E. A. Speed-variator equipment, General Electrico. Speeds, Freight-train	324* 322* 475 72* 517† 10 240 202* 555† 11 555† 170† 15 238\$ 17 238\$ 18 270 415* 498 416*	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F. & T. E. A.) Trains, Freight, Colors for Trains, High-speed C. B. & Q., 17-car stainless-steel Coverdale & Colpitts report on K. C. S. L. & A Southern Belle	400\$ 196* 47* 94* 258* 271 140* 488 215 60* 345* 233* 423* 75* 505 122† 296† 127
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample  S  Safety awards (Harriman medals) St. Louis-San Francisco Grates, Locomotive, Equalizing flow of air through, by S. H. Acker. Locomotive obsolescence, Combating, by J. L. Ryan Sand drying house, Igloo (A. C. L.) Sash cleaning and glazing methods (Can. Nat'l)	421* 469 541\$ 121* 265 484 261 314 238\$ 310* 515†  295  140* 310* 544* 197*	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremer's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done to passenger service Smith, R. H., Locomotive heart of railroaplant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Preventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.) Spee-D filler neck, Reliance Machine Stamping Works Speed pressure control (R. F. & T. E. A. Speeded, Freight-train Average in 1939	324* 322* 475 72* 517† - 240 202* - 555† - 555† - 170† - 175* - 2382* - 18 - 218 - 218 - 218 - 416* - 416* - 169†	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F. & T. E. A.) Trains, Freight, Colors for Trains, High-speed C. B. & Q., 17-car stainless-steel Coverdale & Colpitts report on K. C. S. L. & A Southern Belle	400\$ 196* 47* 94* 258* 271 140* 488 215 60* 345* 233* 423* 75* 505 122† 296† 127
Roling stock being reconditioned Roof, Refrigerator car, Single-board Rules, Interchange: Arbitration Committee report (Mech. Div.) Rule, Loading, reports C. D. O. A. Mech. Div. Running boards, Slotted, Alan Wood Steel Co. Russell, Frank E., Preventing boiler explosions due to low water Ryan, J. L., Combating locomotive obsolescence (St. LS. F.) Ryerson, Edward L., Steel production ample  S  Safety awards (Harriman medals) St. Louis-San Francisco Grates, Locomotive, Equalizing flow of air through, by S. H. Acker. Locarding Applications, by	421* 469 541\$* 121* 265 484 261 314 238\$* 310* 515†  295  140* 310* 544* 197*	Wheel stick eliminates journal damage. Shop operation—electrical welding (C. D. O. A.) Shop, Wheel, at Readville (N. Y., N. H. & H.) Shriver, George M., Goodrich award Sillcox, L. K., Braking trains under modericonditions (Car Foremen's Assn. of Chicago) Slotting rod bushings on a shaper Smith, C. E., What research has done fo passenger service Smith, R. H., Locomotive heart of railroad plant Smoke reduction in North Jersey Snubbers, Truck-spring, by W. S. Spiet (Northwest Carmen's Assn.) Southern Pacific Boiler explosions due to low water, Preventing, by Frank E. Russell City of San Francisco wreck Locomotives, 2-8-8-4 Specifications for materials (Mech. Div.). Spee-D filler neck, Reliance Machine Stamping Works Speed pressure control (R. F. & T. E. A. Speed-variator equipment, General Electrico. Speeds, Freight-train	324* 322* 475 475 240 202* 555† 170† 175* 238\$ 175* 238\$ 415* 270 415* 498 416*	num Co. of America Magnaflux Steam-heat connectors (N. Y. C.) Test rack (see Rack, Test) Tests Boiler, Locomotive (A. S. M. E.) Draft gear (N. Y. C.) Draft gear (N. Y. C.) Draft gear recoil (Mech. Div.) Furnace and firebox support and boiler waste sheets (Mech. Div.) Grate, Locomotive, by S. H. Acker. Locomotive at Selkirk (N. Y. C.) Refrigerator car (Can. Nat'l) Steel—Cor-Ten, USS, vs. copper Truck-spring snubbers, by W. S. Spieth Truck, Freight-car (A. A. R.) Threading machines Double-spindle, Geometric Tool Co. Model C, Beaver Pipe Tools, Inc. Tire-turning tool with cutter control, by F. L. Hall Tongs for handling rivets Train handling, by Leo W. Powell (R. F. & T. E. A.) Trains, Freight, Colors for Trains, High-speed C. B. & Q., 17-car stainless-steel Coverdale & Colpitts report on	400\$ 196* 47* 94* 258* 271 140* 488 215 60* 175* 345* 233* 423* 505 122† 127 523* 515†

\* Illustrated article; † editorial; † short, non-illustrated article or note; † communication.

7

## 1940—GENERAL INDEX (Continued)

Oakite
O'Brie
O'Brie
Ogle C
Okadee
Olds, l
Ortega
Oxwelc
Packer
Page,
Pardee
Partrie
Peddle
Perkin
Pilliod
Pittsbu
Platter
Ploen,
Proffit

Quick

Raymo Repub Resear Reyno Rhode Rich, Richar Roller Roy, Ryan Ryers Ryers Sahlin Salisb Salter Sauer Sauer Sauer Sauer Sauer Sauer Sauer Sauer Sater Sauer Sater Sa

Rose, John O	244 301 560*	Babcock & Wilcox Tube Co	521 172 40 335	Goodrich, B. F. Co. Gordon, George L. Graham-White Sander Corp. Great Lakes Forge Co.	41 172 560 172
Sanders, E. J. Sanders, George Savage, Thomas E. Schmalzried, William Schuette, L. E. Schultz, W. H. Schuster, L. R. Schwartz, William Sheffer, R. W. Smires, Harvey Smith, B. H. Smith, Donald M. Smith, H. M.	210 301	Barton, H. J	520 300*	Gulledge, J. S	41
Savage, Thomas E. Schmalzried, William	42*	Beckette, E. S	335 <b>84</b>	Hafferkamp, Howard R. Halderman, L. J.	84 127
Schultz, W. H.	522 560	Co	84	Hall, C. R. Halladay, H. F. Hammond, Stevens H.	300 520
Schuster, L. R	430* 173	Berriman, J. W	127 127	Hammond, Stevens H	428 559
Sheffer, R. W.	85 42	Bettendorf Company, The	427 84	Harwood, Stephen G.	299 171
Smith, B. H	173	Black, W. M.	560	Harty, William Harwood, Stephen G. Hayes, Harry N. Heckman, William H. Higgins, Edward W. Home Rubber Company	377
Smith, H. M.	522 210	Blackmore, George A	559 243	Higgins, Edward W	172 171
Smith, H. M. Smith, Mark P. Smith, W. C	244 378	Blume, W. A. Boeckler, Neal E.	243 300	Hostettler, Donald C. Houston & Jolles Houston, George H.	84 172
Speier, J. A. Spence, C. H. Steeves, Cuthbert	210 378	Boyne, C. B The	243 299	Houston, George H	172 521
Steeves, Cuthbert	42	Brandenstein, E. W.	172	Huber, A. F.	521
Stewart, H. A. Stewart, M. G.	42	Berriman, J. W. Bethlehem Steel Co. Bettendorf Company, The	128 40	Houston, J. V. Huber, A. F. Huffman, F. M. Hunter, Roy Hunt-Spiller Manufacturing Corp. Hyland, J. L. Hyland, Paul V.	127 427
Swanson, F. J.	210 302	Brooks, Harold S.	84 127*	Hyland, J. L.	127 335
Sullivan, J. L. Swanson, F. J. Swartwood, C. N. Sylvester, I. I.	522 210	Brown, A. M Brown, Truman B	427 299		428
Taylor, Frank W.	560	Brown, Truman B. Budd, Edw. G., Mfg. Co. Buell, S. Nelson Bunting, Robert L. Butterfield, C. H.	377 172	Inland Steel Company	559 335
Taylor, William H.	302	Bunting, Robert L	172 40	International Nickel Co., Inc39,	209 335
Thomas, August Thomas, Paul	173 378		559	Irwin, Jay Isaacs, James	171
Thorson, A. W. Topping, Frank J. Trachta, Gerald P.	210 173*	Canadian Car and Foundry Co., Ltd	559		
Turner, Frank C	301* 336	Carnon, R. A. Carboloy Company, Inc. Carnegie-Illinois Steel Corp. 40	520	Jackson, J. Eugene Johnson, George H.	335 520
Twist, George	130	Carlson, Frank R	427 427	Johnson, H. S., Jr. Johnson, Hobart S. Johnson, Norman B.	520 520
Uhrig, Jacob	301	Carlson, Frank R. Casgrain, George D	335	Johnson, Norman B. Johnston, D. Bruce	209 172
Vick, Sam	522	Champion Handbrake Corp	40 427	Jones & Laughlin Steel Corp.	172 128
Vinsant, H. C.		Charlton, Edward J.	172 41	Jones, Irving H. Justus, R. G.	520 377
Waller, Fred. Wardwell, W. C.	522 85	Charlton, R. A	427 427	V-1 P1 /P	
		Christianson, A.	209	Kalas, Frank T. Kearns, E. E.	39 172
Warren, J. A. Webster, J. M. White, Norman B.	173 244	Church, Maynard D.	427 39	Kelly, W. T., Jr. Kempton, M. R.	127 209
Whittaker, F. Wickhorst, Max. H.	244 86	Christianson, A. Christy, P. J. Church, Maynard D. Clark, Claude L., Dr. Class, George M.	521 427	Kalas, Frank I. Kearns, E. E. Kelly, W. T., Jr. Kempton, M. R. Kimball, G. Cook Kimsey, I. N. Kirkpatrick, C. N.	377 41
W 1180n. C. A	301*	Clause, Robert L. Clingman, R. S. Coffin, J. S., Jr., Co. 243 Coffing Hoist Co.	299 559	Kirkpatrick, C. N	171 377
Winget, Francis H. 42, Wink, L. R. 42,	130	Coffin, J. S., Jr., Co	, 521 171	Klasing Car Brake Co. Koppers Coal Company, The	300
Wolfe, H. O. Wright, F. O. Wright, H. C	335	Copper Iron and Steel Development Asso	1/1	Krape, R. D.	172*
		Cooke, Randolph B., Jr. Copperweld Steel Co. 243, 295 Cox, Arthur T. Craig, Kenneth A. Crocombe, W. E. Crowe, John J. Cunningham, Frank H. Cutler-Hammer, Inc.	335	Koppers Company Krape, R. D. Krautheim, W. C. Krohn, Gilbert H. Kuhn, H. J. Kumer, J. R., Jr.	335 300
Young, William Jasper		Cox, Arthur T	559 299	Kumer, J. R., Jr.	172 300
Zerbach, H. H. Zweifel, John	244 244	Crocombe, W. E.	127 560	Laird, A. W Lampton, Frank W	
		Crowe, John J	209	Lampton, Frank W Landis, H. E., Jr	127 209
PERSONAL MENTION OBITUARIES		Cutler-Hammer, Inc	. 377	Landis, H. E., Jr. Landis Machine Company LaOue, F. L.	171 209
	500	Dabney, W. C. Davenport Besler Corp.	172	Landis Machine Company LaQue, F. L. Lawrence, Fred. L. Learned, Charles G. LeGare, Arthur E. Leighton, William M. Lentz, W. L. Lewis, Paul C. Lippert, Louis F. Lohnes, John W. Lukens Steel Co. Lukens Steel Co. Lukensweld	299 377
Becker, H. G. Brady, John L.	522 244	Davenport Besler Corp. Davenport, James E.  Deuble, Norman L.  Devoe & Raynolds Co., Inc.  DeWolf, John B.  Dickerman, William C.  Diehl, C. A.  Dillon, John A.  Dolan, Frank J.  Doody, I. W.	40*	LeGare, Arthur E.	39 559
Brown, M. F. Crabbs, William J.	210 430	Devoe & Raynolds Co., Inc	. 243	Lentz, W. L.	521* 520
Galloway, George Robert Gibbs, George Gugler, H. C.	336 302	Dickerman, William C.	. 128	Lippert, Louis F.	300
Gugler, H. C. Lewis, J. C. Loree, L. F.	522 430	Diehl, C. A. Dillon, John A	, 427	Lukens Steel Co.	172
Milliken, Colonel lames	130	Dolan, Frank J. Doody, J. W. Duff-Norton Mfg. Co 209, 243, 37	. 127 . 520	Lukenweld, Inc	172 172
		Duff-Norton Mfg. Co209, 243, 373	, 427	Mandanald Tomas	40
Phillips, Arthur G	244 560	Edwards, O. M., Co.		Macce, John S.  Mack, Ray D.  MacLaren, A. W.  Magor Car Corp.  Manning, Maxwell & Moore, Inc	209 520
Russell, Samuel	244	Elastic Stop Nut Corporation30 Electric Storage Battery Company3	. 84	MacLaren, A. W	172* 377
Scudder, Charles J.	86	Elliott, J. H. Emerson, J. B. Erlandson, F. E.	. 171	Manning, Maxwell & Moore, Inc40,	299 335
Montgomery, Ora Clair Pack, Alonzo Phillips, Arthur G. Regan, F. Russell, Samuel Schroeder, J. H. Scudder, Charles J. Trout, William L. Warne, Charles C. Wilson, Clarence L. Wintersteen, John	336* 378	Erlandson, F. E. Ettenger, E. L	. 172 . 520	Martin David I,	2.40
Wilson, Clarence L. Wintersteen, John Wymer, Charles J.	169 336*	Felton, Samuel M.	. 377*	McAlpine W I	560 172
Wymer, Charles J	. 302	Fiele A M	41	McColl, Robert B.	521* 127*
SUPPLY TRADE NOTES		Flogaus, Howard A. Floyd, W. I. Forbes, Fred. W. Forster, J. G. Foseid, P. Robert	209	McConway & Torley Corp.	84 40
Air Reduction Sales Co209, 299, 300	, 335	Forster, J. G.	. 172 . 427	McDonnell, John F	171 127
Alden John W	. 209*	Flame, R. E	. 40	Mersereau, E. C	84
Allegheny Ludlum Steel Corp. 243, 299, 300	. 172	Franklin Railway Supply Co., Inc Fraser, Duncan W.	. 209	Miller-Lewis Railroad Equipment Corp	39 129
Allderdice, Norman Allegheny Ludlum Steel Corp. 243, 299, 300 Allen, C. D. Allen, Robert G. 377	243	Fritschi, G. F	. 40	Miner, W. H., Inc	300
Allison, R. P.  American Brake Shoe & Foundry Co.  127, 172, 243, 428, 521	521	Garlock Packing Company		Moore, W. B.	84
127, 172, 243, 428, 521	, 560 , 559	Gay, H. B. General Electric Company	. 172	Morgan, Earl G. Morgenstern, W. C.	559 299
American Car and Foundry Co84, 129 American Locomotive Co40, 127, 299 American Steel Foundries 129	, 521	General Steel Castings Corp 39, 4 Gibbs, S. W	0, 335 . 243	Moore, W. B.  Morgan, Earl G.  Morgenstern, W. C.  Morton, Allen W.  Mudge, Dr., William A.  39,  Murphy, Frank T.	299
American Locomotive Co	299	Gibbs, S. W. Gillick, L. H. Girdler, John B. Gisholt Machine Co	. 560°		
Ardco Manufacturing Co.	209	Glacuzer, Harry	. 40		171
Car Wheels	. 84	Globe Steel Tubes Company30	0, 520	New York Air Brake Company Nivison, Robert B.	. 172
Austin, E. H.	. 171	Goetz, Mowry E	7, 560	Norberg, R. C.	. 84

\* Indicates photograph.

Oakite Products, Inc. O'Brien, Maurice E. Ogle Construction Co. Okadee Co. Olds, Irving S. Ortega, A. A. Oxweld Railroad Service Co. 335, Packer, B. W.	84 128 427 377 300* 377* 559	Standard International Sales Corp	172 172 84 427* 428 299 559 520 127	Williams, Sidney D. Williams, W. W. Williams, Watson Wilner, Benton J. Wilson, Harvey Woodman, B. S. Worthington Pump & Machinery Corp39, Wright, John E.	84* 84* 335 128 521 335 559 377
Packer, B. W. Page, Arthur W. Pardee, Powell Parker, Frank Partridge, S. C. Peddle, J. B. Perkins, R. W. Pilliod Company, The Pittsburgh Plate Glass Co 209, Pittsburgh Screw and Bolt Corp	41 559 335 84 40 172 39 299 172 84 377 171 209	Taggert, William Talbot, J. Thomas Taurman, A. Taylor, Dr. A. Lloyd Templeton, J. B. Templeton, Kenly & Company. Templeton, W. B. Thomas, Edgar C. Thomas, Harold B. Thomas Machine Mfg. Co. Thulin, C. N. Thulin, Earl E. Timken, Henry H., Jr. Timken Steel & Tube Co. Timken Roller Bearing Co84, 127, 171, Towne, R. W. Travilla, James C., Jr.	243 428* 520 84 171* 171 171 171 171 171 209 559 520 559 39 335	Yale & Towne Mfg. Co.  SUPPLY TRADE NOTES OBITUARIES  Allen, Edwin W	300* 243 429 521 429* 376 41 85 300 243 41 428 129 429*
Reynolds, J. J. Rhodes, C. H. Rich, B. B. Richardson, William H. Robertson, William E. Roller-Smith Company Roy, Nereus Hubert Ryan Devices Company Ryerson, Edward L., Jr. Ryerson & Son., Inc., Joseph T.  Sahlin, Robert C. Salisbury, Howard R. Salter, R. L. Sargent Co. Sauer, H. C. Schroeder, Charles A. Scully, Thomas E. Seydel, H. B. Sheehan, William M. Snyder, George L. Sonquist, Robert G. Spackman. Herbert B.	172 377 171 129* 335 85* 299 243 127 172 335 84 377 127 300 39 335 40* 172 172 172 172	Tyler, William C.  Union Railway Equip. Co	209 300 377 84 209 377 560 377 377 84 40 40 127 559 559 127	Hollingshead, Arthur G. 209, Johnson, Charles H. Jones, David C. Knickerbocker, Charles K. 41, Lewis, Walter C. McCune, C. A. McGimley, Thomas A. Nash, Charles J. Pasche, Charles Purdy, Frank A. Robertson, William E. Rotten, Max Rowan, Charles A. Robertson, William E. S. Smith, D. M. Smith, Gerard L. Spengler, George E. Thompson, William D. Timken, H. H. Van Sweringen, George N. Vauclain, Samuel Matthews Whipple, Abram Ladue Wolft, Herbert W. Wright, C. S.	243 172 85 41 243* 209* 40 209 129* 521 428* 243 428 209 521* 428* 129* 521* 428* 375* 335*
Standard Car Sales, Inc. Standard Car Truck Co.	. 40	Whiting Corp., The	, 428 84	Wright, William Van Doren	

The inclusive page numbers of each 1940 issue of the Railway Mechanical Engineer are as follows:

January 1- 42	July245-302
February 43- 86	August303-336
March 87-130	September
April131-174	October379-430
May175-210	November431-522
June	December